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AN ANNOTATED CATALOGUE OF TYPE SPECIMENS IN THE UNIVERSITY OF ILLINOIS HERBARIUM (ILL)-- 1. PIPERACEAE, EXCEPT PEPEROMIA

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INTRODUCTION

Type specimens in the University of Illinois Herbarium would be of a comparatively modest number, were it not for a concentration in those genera that were studied and revised by the prolific namers of plants, William Trelease and Truman G. Yuncker. By far the largest holdings of type material are to be found in the Piperaceae.

Trelease, Professor of Botany at the University of Illinois from 1912 to 1926, had become interested in Piperaceae after the death of Casimir de Candolle in 1917. Aside from many papers and contributions describing new species, he authored treatments of this family for Cuba (1926), Costa Rica (1929), Panama (1927, 1938, 1940), and Peru (1936). Notable among his taxonomic revisions is that of the genus Ottonia (1935). Trelease continued his studies in Piperaceae until his death in 1945, leaving a considerable amount of unpublished material.

Yuncker, who had previously collaborated with Trelease and published a number of his "new species" [e.g., in contributions to the Flora of Honduras (Yuncker 1938, 1940)], agreed to complete at least some of the unfinished work and was given an appointment as a visiting research professor at the University of Illinois for the academic year 1946/1947. During this time he completed the two-volume work The Piperaceae of northern South America (Trelease & Yuncker 1950). Yuncker continued his work in the Piperaceae, contributing, among others, treatments of this family for Panama (1950), Trinidad and Tobago (1953), Argentina, Bollvia and Chile (1955), Suriname (1957), Jamaica (1960), and Brazil (1972, 1973).

The following annotated catalogue includes all names (basionyms) of members of Piperaceae, for which type material (including paratypes) is located at ILL, except Peperomia, which will be published separately. Generic names involved are: Anderssoniopiper Trel., Artanthe Miq., Enckea Kunth, Ottonia Sprengel, Peltobryon Klotzsch ex Miq., Piper L., Pothomorphe Miq., Sarcorhachis Trel., Schillera Kunth, And Trianaeopiper Trel.

Whenever necessary, as well as feasible, I have designated lectotypes. The entries concerned are marked with an asterisk in

front of the name, including lectotypes designated by other authors but not previously published as such. There are 50 such entries. The status of each specimen was determined or verified by consulting the original description. Unless indicated otherwise, the original spelling and endings have been retained.

The list comprises 935 entries. Thirty-one of the marked lectotypes are at ILL. Some of them actually may be holotypes. In addition, the holotypes of 205 of the names listed, plus isotypes or isolectotypes of 577 names are on deposit at ILL. Fragments of types are cited for 27, and syntypes for 10 entries. For seven of the names, for which no types were designated in the original descriptions, I have cited authentic specimens filed at ILL that may be, in part, duplicate types, or that could be utilized for lectotypification. A total of 436 collections in 236 entries are cited in the category of paratype.

In order to increase the information given in this catalogue and thereby enhance its usefulness, I have cited the place of original publication for each name, and if the holotype or lectotype is not at ILL, I have also, whenever available, given the conventional abbreviation (cf. Holmgren et al. 1981) of the herbarium in which the type is to be found. However, locations for isotypes and paratypes in herbaria other than ILL are not included.

Because my knowledge of Piperaceae is limited and I have no field experience with the group, I have not made any taxonomic decisions. Whenever available, however, I have added the dispositions given in the literature. This information may be incomplete.

The names are listed alphabetically, generic names only once, on a separate line. Authorities for all names entered are cited, but in the annotations, they are not repeated after the first mention of a name. They are abbreviated in accordance with the Draft Index of Author Abbreviations issued by the Royal Botanic Gardens, Kew, in 1980. Literature is cited in the format of Botanico-Periodico-Huntianum.

Except for LECTOTYPE, which is spelled out for emphasis, the kind of type is generally abbreviated: HT = holotype; IT = isotype; ILT = isolectotype; ST = syntype; and PT = paratype. For the latter category, only names of collectors and the collection numbers are given; locality information is omitted.

A typical entry has the following format: (1) specific epithet and authority (2) place and date of publication; (3) type locality, elevation, date of collection; (4) underlined: name of collector(s) and collection number; (5) in parentheses: location of HT or LT and type specimen(s) held at ILL; (7) in brackets: disposition of name by other authors.

ANNOTATED CATALOGUE OF TYPE SPECIMENS

Anderssoniopiper Trel.

panamense Trel., Proc. Amer. Philos. Soc. 73: 329, pl. b. 1934.
 TYPE: "Panama". April 1852. Andersson s.n. (HT: S; fragment of type at ILL).-- [This is the type species of Anderssoniopiper, loc. cit. - Macropiper latifolium (L.f.) Miq. (cf. Yuncker, 1955a, who pointed out that the type came from a plant native in Tahiti, and fide Smith, 1975, 1981)]

Artanthe Miq.

- adenophylla Miq., Linnaea 20: 170. 1847. TYPE: Brazil, "In
 sylvis umbrosis ad Coralfalga, m. Febr." Pohl 5026 (HT: W;
 IT: ILL).-- [= Piper divaricatum Meyer (fide Yuncker, 1972)]
- concinna Miq., Linnaea 20: 151. 1847. TYPE: Brazil, "Padre Correa in umbrosis sylvis." Pohl 5032 (HT: W; IT: ILL).-- This is also the type of Piper concinnum (Miq.) C.DC. in DC., 1869 non Haworth (1821), and the type of P. concinnatoris Yuncker, Bol. Inst. Bot. (São Paulo) 3: 33. 1966, a renaming of the above under Piper.-- [The latter name was adopted by Yuncker, 1972]
- fuscescens Miq. forma pilosior Miq. in Martius, Fl. Bras. 4(1):

 38. 1852. TYPE: Brazil, Santa Cruz do Terza. Pohl 3465 (HT:
 W; IT: ILL).-- This is also a ST of Piper estrellense C.DC.
 in DC., Prodromus 16(1): 272. 1869, a renaming of A.
 fuscescens Miq. under Piper, and an IT of P. estrellense
 [var.] B pilosius (Miq.) C.DC. in DC., loc. eit.-- [- P.
 tectoniifolium Kunth (fide Yuncker, 1972)]
- martinicae Miq., Syst. Piper., 413. 1843. TYPE: Martinique.

 Sieber 254 (HT: B?; IT: ILL).-- [= Sarcorhachis incurva
 (Sieber ex Schultes) Trel. Note that the name Piper incurvum
 Sieber ex Schultes (1822) and the generic name Sarcorhachis
 Trel. (1927) are typified by the same collection (cf. Howard, 1973)]
- opulifolia Miq., Linnaea 20: 160. 1847. TYPE: Brazil, San
 Izidro. Pohl 1572, 5038 [Syntypes, probably to be
 lectotypified: W; probable ST (Pohl s.n., obtained from W) at
 ILL].-- [= P. glabratum Kunth (fide Yuncker, 1972)]
- polyneura Miq., Syst. Piper. 504. 1844. TYPE: Peru, Cochero.
 Poeppig [HT: B; authentic specimen obtained from W, perhaps an IT, at ILL: Poeppig 1463 (no number cited in the protologue)].-- [= P. indecorum Kunth (fide Trel. in Macbr., 1936)]

schottii Miq., Linnaea 20: 157. 1847. TYPE: Brazil. Pohl 1406, 2006 - syntypes, probably to be lectotypified (ST, received from W, at ILL: Pohl 1406).-- [-P. schottii (Miq.) C.DC. in DC. (fide Yuncker, 1972)]

Enckea Kunth

- amalago (L.) Griseb. var. variifolia Griseb., Fl. Brit. West
 Ind., 169. 1859. TYPE: Jamaica. Wullschlaegel 1030 (HT: W?;
 fragments of type at ILL).-- [= P. amalago L. var. variifolia
 (Griseb.) Fawcett & Rendle (1914); this variety recognized by
 Yuncker, 1960 and Adams & Collaborators, 1972]
- <u>sieberi</u> Miq., Syst. Piper. 358. 1844. TYPE: Trinidad, leg.
 <u>Sieber--</u> several syntypes, probably to be lectotypified (ST at ILL: Sieber 224).-- [= P. medium Jacq. (fide Yuncker, 1950 and 1957); = P. amalago (fide Howard, 1973)]

Ottonia Sprengel

- * aguadana Trel., Proc. Amer. Philos. Soc. 75: 696. 1935. TYPE:

 Brazil, Minas Gerais, Fazenda de Aguada. El. 700 m. Mexia

 5178 (specimen marked "Type" by Trelease * LECTOTYPE

 designated herein: ILL).-- [= 0. propinqua Kunth (fide
 Yuncker, 1973)]
 - apodostachya Trel., Proc. Amer. Philos. Soc. 75: 697. 1935.

 TYPE: Brazil, Sta. Catarina, Jaraguá. 11 Oct. 1929. Hoehne
 24388 [HT: SP (fide Yuncker); IT (2 sheets): ILL].
 [- O. martiana Miq. var. martiana (fide Yuncker, 1973)]
- * apodostachya var. vidali Trel., Proc. Amer. Philos. Soc. 75:
 697. 1935. TYPE: Brazil, Espíritu Santo. 17 Oct. 1924.
 Vidal 138 (HT, or LECTOTYPE designated herein: ILL).-- [= 0.
 martiana var. martiana (fide Yuncker, 1973)]
 - <u>armondi</u> Trel., Proc. Amer. Philos. Soc. 75: 697. 1935. TYPE:

 <u>Brazil</u>, Rio de Janeiro, Carmo. <u>Armond</u> 156 (HT: R; IT:

 ILL).-- [= 0. anisum Sprengel (fide Yuncker, 1973)]
 - <u>colliculorum Trel.</u>, Proc. Amer. Philos. Soc. 75: 699. 1935.
 <u>TYPE: Brazil</u>, Morro de Cavalão. <u>Schwacke 28315</u> [HT: R (fide Yuncker, 1973); IT: ILL; PT at ILL: <u>Hoehne 24733</u>].-- [This species recognized by Yuncker, 1973]
 - edwallii Trel., Proc. Amer. Philos. Soc. 75: 702. 1935. TYPE:

 Brazil, São Paulo, Ribeira de Iguapé. 29 Oct. 1894. Loefgren

 & Edwall 2814 = 12679 [HT: SP (fide Yuncker); IT (2 sheets):

 ILL].-- [= 0. propinqua (fide Yuncker, 1973)]

- elocalis Trel., Proc. Amer. Philos. Soc. 75: 703. 1935. TYPE:

 Brazil, São Paulo, Ipiranga. March 1912. Luederwaldt 12675
 [HT: SP (fide Yunker); IT (2 sheets): ILL]. -- [= 0. martiana var. martiana (fide Yunker, 1973)]
- hammari Trel., Proc. Amer. Philos. Soc. 75: 705. 1935. TYPE:
 Brazil, São Paulo, Cantareira. 4 April 1901. Hammar 4551 =
 12669 [HT: SP (fide Yuncker); IT (2 sheets): ILL].-[-0. martiana var. martiana (fide Yuncker, 1973)]
- hoehnei Trel., Proc. Amer. Philos. Soc. 75: 705. 1935. TYPE:
 Brazil, São Paulo, Butantan. 14 Oct. 1918. Hoehne 2480 [HT:
 SP (fide Yuncker); IT (2 sheets): ILL].-- [= 0. martiana var.
 martiana (fide Yuncker, 1973)]
- ituana Trel., Proc. Amer. Philos. Soc. 75: 706. 1935. TYPE:
 Brazil, São Paulo, Itú. 25 March 1897. Russell 199 = 18268
 [HT: SP (fide Yuncker); IT: ILL].-- [= 0. propinqua (fide Yuncker, 1973)]
- loefgreni Trel., Proc. Amer. Philos. Soc. 75: 707. 1935. TYPE:

 Brazil, São Paulo, Pirituba. 30 Oct. 1893. Loefgren 1552 =

 12681 [HT: SP (fide Yuncker); IT: ILL].-- [= 0. martiana var.

 martiana (fide Yuncker, 1973)]
- * mexiae Trel., Proc. Amer. Philos. Soc. 75: 709. 1935. TYPE: Brazil, Minas Gerais, Barbada, Viçosa. El. 680 m. 9 Oct. 1930. Mexia 5160 (specimen marked "Type" by Trelease = LECTOTYPE designated herein: ILL).-- [= 0. anisum (fide Yuncker, 1973)]
- * mexiae var. fertilior Trel., Proc. Amer. Philos. Soc. 75: 709.

 1935. TYPE: Brazil, Minas Gerais, Barbada. El. 710 m.

 9 April 1930. Mexia 4587 [specimen marked "Type" by Trelease

 LECTOTYPE designated herein: ILL; PT at ILL (2 sheets):

 Mexia 4619].-- [= 0. anisum (fide Yuncker, 1973)]
- * miguelitensis Trel., Proc. Amer. Philos. Soc. 75: 709. 1935.

 TYPE: Brazil, Minas Gerais, São Miguel road, Viçosa. El.
 690 m. 4 April 1930. Mexia 4564 [published as 4964-specimen cited as HT by Yuncker (1973) = LECTOTYPE: US; ILT:
 ILL (2 sheets but only one marked "Type" by Trelease); PT at
 ILL: Mexia 4137, 4373-a, 4499, 4564-a (published as 4964-a, a
 Syntype), 4676 (in part), and 4702].-- [= 0. propinqua (fide
 Yuncker, 1973)]
- * miguelitensis var. longipes Trel., Proc. Amer. Philos. Soc. 75: 710. 1935. TYPE: Brazil, Minas Gerais, Fazenda de Graziuma, Viçosa. El. 700 m. 15 May 1930. Mexia 4702 [HT, or

- LECTOTYPE designated herein (specimen marked "Type" by Trelease): ILL; IT or ILT (in part cited for 'var.' miguelitensis): ILL].-- [= 0. propinqua (fide Yuncker, 1973)]
- * miguelitensis var. parcepilosa Trel., Proc. Amer. Philos. Soc. 75: 710. 1935. TYPE: Brazil, Minas Gerais, Areponga to São Miguel road. El. 850 m. 5 May 1930. Mexia 4676-b [LECTOTYPE designated herein: ILL (the first of 2 syntypes cited but only this specimen marked "Type" by Trelease); ST at ILL: Mexia 4676-a].-- [= 0. propinqua]
 - <u>mosenii</u> Trel., Proc. Amer. Philos. Soc. 75: 710. 1935. TYPE:
 <u>Brazil</u>, São Paulo, Serra de Caracol. <u>Mosen 1689</u> (HT: S; fragments of type at ILL).-- [= <u>O</u>. <u>frutescens</u> (C.DC.) Trel. (fide Yuncker, 1973)]
 - palhosana Trel., Proc. Amer. Philos. Soc. 75: 712. 1935. TYPE:
 Brazil, Palhoça, Florianopolis. 22 Oct. 1929. Hoehne 24462
 [HT: SP (fide Yuncker); IT: ILL].-- [= 0. propinqua (fide Yuncker, 1973)]
 - peruibensis Trel., Proc. Amer. Philos. Soc. 75: 712. 1935. TYPE:

 Brazil, São Paulo, Peruibe. 30 Oct. 1891. Loefgren 1625 =

 12677 [HT: SP (fide Yuncker); IT: ILL].-- [= 0. propinqua (fide Yuncker, 1973)]
 - pohliana Miq., Linnaea 20: 179. 1847. TYPE: Brazil, "In sylvis ad Coralfaga, m. Febr." Pohl 5033 (HT: W; PT at ILL: Pohl 3031 = Mikan 30).-- [= Piper hoffmannseggianum Roemer & Schultes (fide Yuncker, 1973)]
- * riedelii Trel., Proc. Amer. Philos. Soc. 75: 713. 1935. TYPE:

 Brazil. Riedel s.n. [HT, or LECTOTYPE designated herein: ILL
 (the specimen was obtained from W)].-- [* ?0. frutescens
 (fide Yuncker, 1973)]
 - rio-feioana Trel., Proc. Amer. Philos. Soc. 75: 713. 1935.

 TYPE: Brazil, "Río Feio Expedition". Edwall 12666 [HT: SP (fide Yuncker); IT: ILL].-- [= 0. martiana var. martiana (fide Yuncker, 1973)]
 - santa-annae Trel., Proc. Amer. Philos. Soc. 75: 713. 1935.

 TYPE: Brazil, São Paulo, Santa Anna. Nov. 1912. Brade 5786

 = 7183 [HT: SP (fide Yuncker); IT: ILL].-- [= 0. propinqua (fide Yuncker, 1973)]
 - taperana Trel., Proc. Amer. Philos. Soc. 75: 715. 1935. TYPE:

 Brazil, Pernambuco, Palmares, Tapera. Oct. 1931. Pickel

 2789 (HT: US 1541640; IT: ILL).-- [This species recognized
 by Yuncker, 1973]

usterii Trel., Proc. Amer. Philos. Soc. 75: 716. 1935. TYPE:
Brazil, São Paulo, São Caetano. 16 Nov. 1907. Usteri 12683
(HT: SP; IT: ILL).-- [= ?0. propinqua (cf. Yuncker, 1973)]

Peltobryon Klotzsch ex Miq.

poeppigii Klotzsch ex Miq., Syst. Piper. 370. 1844. TYPE: Peru.
Poeppig 1738 [HT: B; IT: ILL (obtained from W)].-- [= Piper callosum Ruiz & Pavon (fide Yuncker, 1955, 1972)]

Piper L.

- <u>abditum</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 130.

 1936. TYPE: Peru, Loreto, Yurimaguas. El. 135 m. Aug.-Sep.
 1929. <u>Killip & Smith</u> 27659 (HT: US; IT: ILL).
- acamptostachys Trel. in Feddes Repert. Spec. Nov. Regni Veg. 24: 361. 1928. TYPE: Haiti, La Selle, Morne des Commissaires. 25 Aug. 1926. Ekman 6742 (HT: ILL).
- achoteanum Trel., J. Wash. Acad. Sci. 19: 328. 1929. TYPE:

 Honduras, Comayagua, El Achote, near Siguatepeque. El.
 1500 m. 18 Feb. 1928. Standley 56125 (HT: F 581879; IT:
 ILL).-- [This species recognized by Standley & Steyerm.,
 1952]
- achromatolepis Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 130. 1936. TYPE: Peru, Loreto, Fortaleza, Yurimaguas. El. 155-210 m. Oct.-Nov. 1929. Williams 4244 (HT: F 624649; IT: ILL; PT at ILL: Killip & Smith 27254).
- actae Trel. in Yuncker, Field Mus. Publ. Bot. 17: 340. 1938.
 TYPE: Honduras, in sandy soil along the beach [near] Tela.
 20 July 1934. Yuncker 4657 (HT: ILL).
- adornatispicum Trel. in Yuncker, Field Mus. Publ. Bot. 17: 340.

 1938. TYPE: Honduras, Comayagua, in a ravine at El Achote, above Siguatepeque. El. 1050 m. 15 July 1936. Yuncker, Dawson & Youse 5885 (HT: ILL).
- aduncum L. var. garcia-barrigae Trel. & Yuncker, Piperaceae no. S. Amer. 1: 251. 1950. TYPE: Colombia, Meta, Río Negro. El. 500 m. 25 May 1940. García Barriga 8472 (HT: US 1851560; PT at ILL: Killip 34419).
- aduncum var. sigualense Trel. in Feddes Repert. Spec. Nov.
 Regni Veg. 23: 5, 8. 1926. TYPE: Cuba, El Sigual, Eggers
 4654 (HT: US 798411; PT at ILL: Ekman 14890).

- aegrum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 132.
 1936. TYPE: Peru, Junín, Puerto Bermúdez. El. 375 m. 14-17
 July 1929. Killip & Smith 26478 (HT: US; IT: ILL).
- aequale Vahl forma acutispicum Trel. ex Stehlé, Fl. Descr.
 Antill. Fr. 2(1): 82. 1940; Bull. Agric. Martinique 9(3):
 159. 1940. TYPE: Martinique. 8 Aug. 1939. Stehlé & Stehlé
 3382 (HT and IT: ILL).-- [= P. aequale (fide Howard, 1973)]
- aequale [var.] ß ovalifolium C.DC. in DC., Prodromus 16(1): 311.

 1869. TYPE: Trinidad. Sieber 192 (HT: G-DC; IT: ILL).-
 [This variety recognized by Yuncker, 1953]
- aequale var. variifolium Trel. ex Stehlé, Bull. Agric.
 Martinique 9(3): 158. 1940. Martinique. 12 Aug. 1939.
 Stehlé & Stehlé 3394 (HT: ILL).-- [= P. aequale (fide Howard, 1973)]
- aereum Trel., Contr. U.S. Nat. Herb. 26(4): 144. 1929. TYPE:

 Costa Rica, Cartago, Orosi.
 Standley 39842 (HT: US 1229481;

 PT at ILL:
 Standley & Valerio 50891, 50970, 51205).-- [This species recognized by Burger, 1971]
- aeruginosibaccum Trel., J. Wash. Acad. Sci. 19: 328. 1929.

 TYPE: Honduras, Atlántida, near La Ceiba. 11 March 1928.

 Standley 56735 (HT: F 581879; IT: ILL).-- [= P.

 jacquemontianum Kunth (fide Burger, 1971)]
- affectans Trel. in Woodson & Schery, Ann. Mo. Bot. Gard. 27:

 287. 1940. TYPE: Panama, Chiriquí, vicinity of Casita Alta,
 Volcán de Chiriquí. El. 1500-2000 m. 1938. Woodson, Allen
 & Seibert 865 (HT: ILL).-- [= P. imperiale (Miq.) C.DC. (fide Yuncker, 1950 and Burger, 1971)]
- affictum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):

 132. 1936. TYPE: Peru, Loreto, Balsapuerto. El. 150-350 m.

 28-30 Aug. 1929. Killip & Smith 28581 (HT: US; IT: ILL; PT at ILL: Killip & Smith 28563).
- afflictum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):

 132. 1936. TYPE: Peru, Loreto, Mainas. 1830. Poeppig s.n.
 (HT: W; PT at ILL: Killip & Smith 27067, 29293; Williams 2699).
- aguacalientis Trel. in Standley, Field Mus. Publ. Bot. 18: 330.
 1937. TYPE: Costa Rica, SW of Agua Caliente. El. 1560 m.
 Stork 1317 (HT: ILL).-- [= P. hispidum Sw. (fide Burger,
 1971)]

- albert-smithii Trel. & Yuncker, Piperaceae no. S. Amer. 1: 413, fig. 375. 1950. TYPE: Colombia, Santander, vicinity of El Roble. El. ca 1500 m. 16 Feb. 1927. Killip & Smith 19360 (HT: US 1354616; IT: ILL).-- [= P. cf. veraguense C.DC. in DC. (cf. Burger, 1971)]
- albopapillatum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 133. 1936. TYPE: Peru, Junín, Schunke Hacienda, San Ramón. El. 1400-1700 m. 8-12 June 1929. Killip & Smith 24616 (HT: US; IT: ILL).
- allatum Trel. in Yuncker, Field Mus. Publ. Bot. 17: 341. 1938.

 TYPE: Honduras, Comayagua, in a ravine at El Rincon, 10 mi. W of Siguatepeque. El. 1400-1500 m. 24 July 1936. Yuncker, Dawson & Youse 6068 (HT: ILL).
- alleni Trel. in Woodson & Seibert, Ann. Mo. Bot. Gard. 25: 826.

 1938. TYPE: Panama, Darién, Pinogana-Yavisa Trail.
 El. 15 m. 17 March 1937. Allen 270 (HT: ILL).-- [= P. lucigaudens C.DC. var. allenii (Trel.) Yuncker in Woodson & Schery, 1950]
- alstoni Trel. in Woodson & Schery, Ann. Mo. Bot. Gard. 27: 287.

 1940. TYPE: Panama, Coclé, north rim of El Valle de Antón.

 4 June 1939 [cited as "Feb. 12"]. Alston & Allen 1842 (HT: ILL).-- [= P. auritum Kunth (fide Yuncker, 1950 and 1957]
- alveatum Trel. in Woodson & Schery, Ann. Mo. Bot. Gard. 27: 287.

 1940. TYPE: Panama, Bocas del Toro, vicinity of Nievecita.

 Aug. 1938. Woodson, Allen & Seibert 1837 (HT: ILL).-- [= P.

 linearifolium C.DC. (fide Yuncker, 1950); = P.

 friedrichsthalii C.DC. in DC. (cf. Burger, 1971)]
- alveolatifolium Trel., J. Wash. Acad. Sci. 19: 329. 1929. TYPE:

 Honduras, Comayagua, near Siguatepeque. El. 1080-1400 m.

 Feb. 1928. Standley 56344 (HT: F 581751; IT: ILL).-- [= P.

 bredemeyeri Jacq. (fide Burger, 1971)]
- amazonasense Trel. & Yuncker, Piperaceae no. S. Amer. 1: 392,
 fig. 352. 1950. TYPE: Venezuela, Amazonas, Isla de San
 Carlos de Río Negro. El. 100 m. 27 Feb. 1942. Williams
 14504 (HT: US 1859700; IT: ILL).
- amnigaudens Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 134. 1936. TYPE: Peru, Loreto, steep bank of Río Santiago.
 El. 200 m. 23 Dec. 1931. Mexia 6332 (HT: US; IT: ILL).
- amoenum Yuncker in Trel. & Yuncker, Piperaceae no. S. Amer. 1:
 293, fig. 259. 1950. TYPE: Colombia, Chocó, Río Nuqui.
 El. 200 m. 23 Jan. 1947. Haught 5474 (HT: ILL).

- amphibium Trel. in Woodson & Schery, Ann. Mo. Bot. Gard. 27:

 288. 1940. TYPE: Panama, Coclé, between Aguadulce and Antón.

 El. 15-50 m. 12 July 1938. Woodson, Allen & Seibert 1222

 (HT: ILL).-- [= P. taboganum C.DC. (fide Yuncker, 1950 and annotation); = P. pseudo-fuligineum C.DC. (cf. Burger, 1971)]
- amphitrichum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 134. 1936. TYPE: Peru, Junín, Colonia Perené. El. 680 m.
 14-22 June 1929. Killip & Smith 24938 (HT: US; IT: ILL).
- amplectenticaule Trel. & Yuncker, Piperaceae no. S. Amer. 1: 325, fig. 290. 1950. TYPE: Colombia, Meta, Río Negrito, 70 km. E of Villavicencio. 25 Dec. 1938. Haught 2491 (HT: US 1707110; IT: ILL; PT at ILL: Haught 4289).
- andresense Trel. in Standley, Field Mus. Publ. Bot. 17: 230.

 1937. TYPE: Guatemala, Petén, Lake Petén, San Andrés. 3 May
 1933. Lundell 3203 (HT: ILL; PT at ILL: Lundell 2073).-[= P. martensianum C.DC. (fide Standley & Steyerm., 1952)]
- andresense var. subcalvescens Trel. in Standley, Field Mus.

 Publ. Bot. 17: 231. 1937. TYPE: Guatemala, Petén, Yaxha.

 23 March 1933. Lundell 2011 (HT: ILL).-- [= P. martensianum (cf. Standley & Steyerm., 1952)]
- angustiae Trel. [?ined.] var. quiotepecanum Trel., J. Wash.
 Acad. Sci. 19: 329. 1929. TYPE: Mexico, Oaxaca, Pueblo de
 Quiotepec, Cuicatlán. El. 500 m. H. & C. Conzatti & Gomez
 2383 (HT: F 246911; IT: ILL).
- anisophyllum Trel., Contr. U.S. Nat. Herb. 26(4): 157. 1929.

 Based on P. dilatatum Rich. var. acutifolium C.DC. TYPE:
 Costa Rica, El General. Tonduz 3385 (Pseudo-paratype at ILL, i.e., specimen cited by Trel.: Standley & Valerio 44228).-- [= P. terrabanum C.DC. (fide Burger, 1971)]
- annulatispicum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 329, fig. 297. 1950. TYPE: Colombia, Antioquia, "Belén" [the sheet at ILL is labelled "Medellín"]. Archer 1032 (HT: US 1542614; probable IT: ILL).
- * antioquiense C.DC. var. pitaense Yuncker in Trel. & Yuncker,
 Piperaceae no. S. Amer. 1: 319. 1950. TYPE: Colombia,
 Antioquia, on Quibrada Pita, E of Turbo. El. 100 m.
 10 April 1946. Haught 4787 (LECTOTYPE designated herein:
 ILL; ILT: ILL).
 - apertum Trel. in Yuncker, Field Mus. Publ. Bot. 17: 341. 1938.

 TYPE: Honduras, Cortés, Lake Yojoa. El. 630 m. 29 July
 1934. Yuncker 4821 (HT: Yuncker's herbarium; fragments of type at ILL).

- apertum var. nodosum Trel. in Yuncker, Field Mus. Publ. Bot. 17: 341. 1938. TYPE: Honduras, Cortés, Lake Yojoa. El. 630 m. 29 July 1934. Yuncker 4821-a (HT: ILL).
- apodum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 135.
 1936. TYPE: Peru, Huánuco, Muña. El. 2100 m. May-June
 1923. Macbride 3987 (HT: F 535049; IT: ILL).
- apurimacanum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 135. 1936. TYPE: Peru, Ayacucho, Río Apurimac near Kimpitiriki. El. 400 m. 10, 11 May 1929. Killip & Smith 22926 (HT: US; IT: ILL).
- apus Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 136.
 1936. TYPE: Peru, Junín, Pichis Trail, Santa Rosa. El. 625-900 m. 6, 7 July 1929. Killip & Smith 26192 (HT: US; IT: ILL).
- <u>aragonense</u> Trel., Contr. U.S. Nat. Herb. 26(4): 146. 1929.

 TYPE: Costa Rica, Aragon. El. 700 m. 20 Oct. 1894. <u>Tonduz</u>

 9021 (HT: US 796497; PT at ILL: <u>Tonduz</u> 12790).-- [= P.

 multiplinervium C.DC. (cf. Burger, 1971)]
- araneatum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 136. 1936. TYPE: Peru, Junin, Colonia Perené. El. 680 m.
 14-25 June 1929. Killip & Smith 25242 (HT: US; IT: ILL).
- <u>arbelaezii</u> Trel. & Yuncker, Piperaceae no. S. Amer. 1: 155, fig. 134. 1950. TYPE: Colombia, Santander, Barbosa. El. 1500-1600 m. 24 Feb. 1940. <u>Arbeláez & Cuatrecasas 8127</u> (HT: US 1796074; IT: ILL; PT at <u>ILL</u>: <u>Killip & Smith 15265</u>).
- * arbuscula Trel., J. Arnold Arb. 9: 146. 1928. TYPE: New Guinea,
 Papua, U-Uma River. 18 May 1926. Brass 1449 (LECTOTYPE designated herein: A; ILT: ILL).-- [* P. wichmannii C.DC. (fide Chew, 1972)]
 - archeri Trel. & Yuncker, Piperaceae no. S. Amer. 1: 111, fig. 84. 1950. TYPE: Colombia, La Sierra, 18 km N of Medellín. El. ca 200 m. 4 Jan. 1931. Archer 1375 [HT: US 1542650; IT: ILL; PT at ILL: Archer 1555, 2122; Tomás Alberto 7, 1675, 2122, s.n. (2 sheets); Tomás Alberto & Daniel 2731].
 - archidonense Trel., Ciencia (Mexico) 2: 206. 1941. TYPE:
 Ecuador, Napo-Pastaza, Archidona. 4 May 1865. Isern 1791
 (HT: MA; fragment of type at ILL).-- [This species upheld by Trel. & Yuncker, 1950]

- arctilimbum var. allenii Trel. in Woodson & Schery, Ann. Mo.

 Bot. Gard. 27: 288. 1940. TYPE: Panama, Coclé, El Valle de

 Antón. El. 600 m. 17 Sep. 1939. Allen
 [= P. linearifolium (fide Yuncker, 1950; P. friedrichsthalii
 (fide Burger, 1971)]
- arduum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 136.

 1936. TYPE: Peru, Loreto, Puerto Arturo, Yurimaguas.
 El. 155-210 m. Oct.-Nov. 1929. Williams 5174 (HT: F 618063; IT: ILL).
- arenicola Trel. in Yuncker, Field Mus. Publ. Bot. 17: 341. 1938.

 TYPE: Honduras, between Tela and Lancetilla. El. 27 m.

 Yuncker 4499 (HT: ILL).
- argentamentum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 256, fig. 218. 1950. TYPE: Colombia, Chocó, Istmina. El. ca 75 m. 29 April 1939. Killip 35452 (HT: US 1772162; IT: ILL; PT at ILL: Cuatrecasas 16057; Killip 34758; Killip & Cuatrecasas 39048).
- aripoense Trel., Bull. Torrey Bot. Club 51: 5. 1924. TYPE:

 Trinidad, heights of Aripo. 16 March 1921. Britton &
 Freeman 2353 (HT: NY; IT: ILL).-- [= P. demeraranum (Miq.)
 C.DC in DC. (fide Yuncker, 1953)]
- <u>armatum Trel. & Yuncker</u>, Piperaceae no. S. Amer. 1: 243, fig. 211. 1950. TYPE: Ecuador, Napo-Pastaza, Zatzayacu. El. 400-500 m. 25 March 1935. <u>Mexia</u> 7096 (HT: US 1619103; IT: ILL).
- <u>arrectispicum</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 137. 1936. TYPE: Peru, San Martín, San Roque. El. 1350-1500 m. Jan.-Feb. 1930. <u>Williams</u> 6993 (HT: F 629617; IT: ILL).
- arreptum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 137. 1936. TYPE: Peru, Junin, Puerto Bermúdez. El. 375 m.
 14-17 July 1929. Killip & Smith 26487 (HT: US; IT: ILL).
- artanthe C.DC. in DC. var. strigosum Trel. & Yuncker, Piperaceae
 no. S. Amer. 1: 359. 1950. TYPE: Colombia, between Yarumal
 and the Llanos de Cuiba. El. 2300-2700 m. 20 Feb. 1942.
 Metcalf & Cuatrecasas 30143 (HT: US 1833392; IT: ILL).

- arundinetorum Trel., Contr. U.S. Nat. Herb. 26(4): 159. 1929.

 TYPE: Costa Rica, San José, near Laguna de la Escuadra, NE of El Copey. El. 2000-2200 m. 16 Dec. 1925. Standley 41967 (HT: US 1307268; IT: ILL).-- [= P. subsessilifolium C.DC. (fide Burger, 1971)]
- asclepiadifolium Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 138. 1936. TYPE: Peru, Loreto, Iquitos. El. 100 m. 3-11 Aug. 1929. Killip & Smith 27016 (HT: US; IT: ILL).
- aspericaule Trel., J. Wash. Acad. Sci. 19: 329. 1929. TYPE:
 Honduras, Atlántida, near Tela. 27 Jan. 1928. Standley
 55125 (HT: F 583270; IT: ILL).
- asperrimicaule Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 138. 1936. TYPE: Peru, Loreto, Yurimaguas. El. 135 m. Aug.-Sep. 1929. Killip & Smith 27955 (HT: US; IT: ILL).
- asterotrichum C.DC. var. <u>yessupense</u> Trel. in Macbr., Field Mus.

 Publ. Bot. 13(No. 357): 139. 1936. TYPE: Peru, Junin, Puerto
 Yessup. El. 400 m. 10-12 July 1929. <u>Killip & Smith 26271</u>
 (HT: US; IT: ILL).
- <u>atlantidanum</u> Trel., J. Wash. Acad. Sci. 19: 329. 1929. TYPE:

 Honduras, Atlántida, near La Ceiba. 11 March 1928. <u>Standley</u>

 56739 (HT: F 581620; IT: ILL; PT at ILL: <u>Standley</u> 54938,

 55736, 56600).-- [- P. pseudo-fuligineum (fide Burger, 1971)]
- atlantidanum var. sibunense Trel. ex Standley in Standley & Record, Field Mus. Publ. Bot. 12: 406. 1936. TYPE: British Honduras (Belize), Craig Point, Sibun River. 15 Nov. 1934.

 Gentle 1381 (HT: MICH; IT: ILL).-- [= P. cf. pseudo-fuligineum]
- atlantidanum var. yoroense Trel., J. Wash. Acad. Sci. 19: 330.

 1929. TYPE: Honduras, Yoro, near Progreso. El. 30 m.
 24 Jan. 1928. Standley 55073 (HT: F 583981; IT: ILL).-[= P. cf. pseudo-fuligineum]
- atrichopus Trel., J. Wash. Acad. Sci. 19: 330. 1929. TYPE:

 Honduras, Atlántida, Lancetilla Valley near Tela. El. 150 m.
 16 Jan. 1928. Standley 54594 (HT: F 583633; IT: ILL; PT at
 ILL: Standley 52616, 52871, 53290, 56757, 58757).
- atrichopus var. arborescens Trel. in Yuncker, Field Mus. Publ.

 Bot. 9: 276. 1940. TYPE: Honduras, Atlântida, about 25 km E
 of La Ceiba. El. 300 m. 21 July 1938. Yuncker, Koepper &
 Wagner 8578 (HT: ILL).

- atrobaccum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 234, fig. 202. 1950. TYPE: Colombia, El Valle, forest above La Cumbre. El. 1800-2100 m. 14-19 May 1922. Killip 5596 (HT: US 1141884; IT: ILL; PT at ILL: Killip 11598; Killip & García 33695; Pennell & Killip 7225).
- atrobaccum var. pubinervulum Trel. & Yuncker, Piperaceae no. S.

 Amer. 1: 235. 1950. TYPE: Colombia, El Valle, Río Calima
 Valley, El Cairo, between Darién and Mediacanoa. El. 16501750 m. 7 Jan. 1943. Cuatrecasas 13933 (HT: US 1853102; IT: ILL).
- atropremnon Trel. in Feddes Repert. Spec. Nov. Regni Veg. 24: 361. 1928. TYPE: Haiti, La Hotte. El. 700 m. 30 March 1927. Ekman 7920 (HT: ILL).
- attenuatamentum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 139. 1936. TYPE: Peru, Junín, Puerto Bermúdez. El. 375 m. 14-17 July 1929. Killip & Smith 26513 (HT: US; IT: ILL).
- auriculiferum Trel., Contr. U.S. Nat. Herb. 26(4): 156. 1929.

 TYPE: Costa Rica, Guanacaste, El Silencio, near Tilarán.
 El. 750 m. 13 Jan. 1926. Standley & Valerio 44648 (HT: US 1307316; IT: ILL).-- [= P. terrabanum (fide Burger, 1971)]
- auritilaminum Trel. in Yuncker, Field Mus. Publ. Bot. 9: 277.
 1940. TYPE: Honduras, Atlántida, lower slopes of Mt.
 Cangrejal. 8 July 1938. Yuncker, Koepper & Wagner 8263 (HT: ILL).
- <u>auritilimbum</u> Trel. in Yuncker, Field Mus. Publ. Bot. 9: 277.
 1940. TYPE: Honduras, Atlântida, Rio Danto, slopes of Mt. Cangrejal. 2 Aug. 1938. <u>Yuncker</u>, <u>Koepper & Wagner</u> <u>8763</u> (HT: ILL).
- <u>auritum</u> Kunth forma <u>rinconense</u> Trel. in Yuncker, Field Mus.
 <u>Publ.</u> Bot. 17: 342. 1938. TYPE: Honduras, Comayagua, El Rincon, Siguatepeque. El. 1400-1500 m. 24 July 1936.
 <u>Yuncker, Dawson & Youse 6064</u> (HT: ILL).
- austro-mexicanum Trel., J. Wash. Acad. Sci. 16: 204. 1926.
 TYPE: Mexico, Chiapas, Monserrate. 1925. Purpus 35 (HT: US 1209370; IT: ILL).
- azupizuanum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 139. 1936. TYPE: Peru, Junin, Pichis Trail, San Nicolás to Azupizú. El. 650-900 m. 6 July 1929. Killip & Smith 26094 (HT: US; IT: ILL).

- baculiferum Trel., Contr. U.S. Nat. Herb. 26(4): 180. 1929.

 TYPE: Costa Rica, Guanacaste, El Arenal. El. 500 m.

 Jan. 1926. Standley & Valerio 45052 (HT: US 1307342; PT at ILL: Standley & Valerio 45154).-- [- P. hispidum (fide Burger, 1971)]
- bajanum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 390, fig. 350. 1950. TYPE: Colombia, Santander, vicinity of La Baja. El. 3000 m. Jan. 1927. Killip & Smith 18119 (HT: US 1353586; IT: ILL).
- balaoense C.DC., Annuaires Conserv. Jard. Bot. Genevè 21: 258.

 1920. TYPE: Ecuador, Guayas, Balao. Jan. 1892. Eggers

 14350 (HT: M; fragment of type at ILL).-- [= P. manabinum
 C.DC. (fide Trel. & Yuncker, 1950)]
- balsapuertanum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 140. 1936. TYPE: Peru, Loreto, Balsapuerto. El. 150-350 m. 28-30 Aug. 1929. Killip & Smith 28394 (HT: US; IT: ILL).
- <u>banaoanum</u> Trel. in Feddes Repert. Spec. Nov. Regni Veg. 23: 4, 7. 1926. TYPE: Cuba, El Plurial, Lomas de Banao, Santa Clara. El. 850 m. 27 Jan. 1926. <u>Ekman 16230</u> (HT: ILL).
- barbatum Kunth [var.] isernii Trel., Ciencia (Mexico) 2: 207.

 1941. TYPE: Ecuador, Quito. Isern "Nos. 1271, 1268"

 (Syntypes, perhaps to be lectotypified: MA?; ST at ILL: Isern 1268).-- [= P. barbatum var. barbatum (fide Trel. & Yuncker, 1950)]
- barbirostre Trel. in Woodson & Schery, Ann. Mo. Bot. Gard. 27:
 288. 1940. TYPE: Panama, Chiriquf, vicinity of "New Switzerland". Jan. 1939. Allen 1365 (HT: ILL).-- [= P. hispidum (fide Yuncker, 1950 and 1957)]
- begoniicolor Trel. & Yuncker, Piperaceae no. S. Amer. 1: 140, fig. 117. 1950. TYPE: Colombia, Antioquia, Puerto Valdivia, between Valdivia and Yarumal. El. 1610 m. 20 Feb. 1942.

 Metcalf & Cuatrecasas 30099 (HT: US 1833353; IT: ILL; PT at ILL: Daniel & González 2123).
- begoniicolor var. lobatum Trel. & Yuncker, Piperaceae no. S.
 Amer. 1: 141. 1950. TYPE: Colombia, El Valle, San Antonio,
 W of Cali. El. 1900-2350 m. Feb.-March 1939. Killip &
 García 33915 (HT: US 1770778; IT: ILL; PT at ILL: Ewan
 16158).
- <u>bejucalanum</u> Trel. in Feddes Repert. Spec. Nov. Regni Veg. 29: 28. 1931. TYPE: Santo Domingo, Bejucal, San José de Ocoa, Azua. 6 March 1929. <u>Ekman</u> 11805 (HT: ILL).

- belloi Yuncker, Bol. Inst. Bot. (São Paulo) 3: 85, fig. 73.

 1966. TYPE: Brazil, Espírito Santo, Concórdia da Cachoeira.
 1889. Bello 567 (HT: R; PT at ILL: São Paulo,
 1433).-- [This species upheld by Yuncker, 1973]
- bellum Yuncker in Trel. & Yuncker, Piperaceae no. S. Amer. 1: 57, fig. 48. 1950 (publ. as bella). TYPE: Colombia, Antioquia, near Vijagual, 30 km S of Turbo. 13 April 1945. Hought 4559 (HT: US 1709141; IT: ILL).
- benianum Trel. in Rusby, Mem. N. Y. Bot. Gard. 7: 222. 1927.
 TYPE: Bolivia, Huachi, head of Beni River. El. 3000 ft.
 Sep. 1921. <u>Cárdenas 466</u> (HT: NY; IT: ILL).-- [= P. callosum (fide Yuncker, 1955)]
- <u>bermudezense</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 141. 1936. TYPE: Peru, Junín, Puerto Bermúdez. El. 375 m.
 14-17 July 1929. Killip & Smith 26424 (HT: US; IT: ILL).
- bisasperatum Trel., Contr. U.S. Nat. Herb. 26(4): 173. 1929.

 TYPE: Costa Rica, Cartago, Cerro de la Carpintera.

 El. 1500-1850 m. Feb. 1924. Standley 35723 (HT: US 1229396; PT at ILL: Standley & Valerio 49226, 50293, 50413, 51251, 52002, 52030, 52053).-- [This species recognized by Burger, 1971]
- blepharilepidum Trel., Contr. U.S. Nat. Herb. 26(4): 160. 1929.

 TYPE: Costa Rica, Guanacaste, Quebrada Serena, SE of Tilarán.
 El. 700 m. 27 Jan. 1926. Standley & Valerio 46217 (HT: US 1307434; IT: ILL).-- [This number is also cited, with a question mark, among the paratypes of P. verruculigerum Trel. (op. cit.); = P. bisasperatum (fide Burger, 1971)]
- bogotense C.DC. var. ovalilimbum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 95. 1950. TYPE: Colombia, Santander, vicinity of La Baja. El. 2700-3500 m. Jan. 1927. Killip & Smith 18028 (HT: US 1353512; IT: ILL; PT at ILL, from Colombia: Ariste Joseph 50, 57, A-372; Cuatrecasas 11561; Cuatrecasas & Carcía Barriga 10257; Daniel & González 1847; Killip & Smith 16720, 16953, 17127, 19662, 19689; Silvano Jorge 190, 191, 192; from Venezuela: Tamayo 2402).
- bogotense var. usaquemense Trel., Trab. Mus. Nac. Ci. Nat. Ser.

 Bot. 33: 48. 1936 (without a Latin diagnosis). TYPE:

 Colombia, Cundinamarca, Usaquén. El. 2700 m. Arbeláez 610

 (HT: US; PT at ILL: Cuatrecasas 2416).-- [= P. bogotense

 (fide Trel. & Yuncker, 1950 and Yuncker, 1950)]

- bopianum Trel. in Rusby, Mem. N. Y. Bot. Gard. 7: 223. 1927.

 TYPE: Bolivia, Bopi River Valley. El. 3000 ft. Sep. 1921.

 Rusby 669 (HT: NY; IT: ILL).-- [- P. longestylosum C.DC.

 (fide Yuncker, 1955)]
- <u>boquianum</u> Trel. & Yuncker, Piperaceae no. S. Amer. 1: 340, fig. 311. 1950. TYPE: Colombia, Caldas, W of Río Boquía Salento. El. 1600-1900 m. 27 July 1922. <u>Killip & Hazen 8806</u> (HT: US 1142702; IT: ILL).
- <u>brachypodon</u> (Bentham) C.DC. var. <u>radicescens</u> Trel. & Yuncker, <u>Piperaceae</u> no. S. Amer. 1: 213. 1950. TYPE: Colombia, Chocó, Tutunendo, 20 km N of Quibdó. El. ca 80 m. May 1931. <u>Archer</u> 2152 (HT: US 1519167; IT: ILL).
- * brachystylum Trel., Ciencia (Mexico) 2: 207. 1941. TYPE:

 Ecuador, Archidona. Isern 1333 [syntype, cited as "Type" by
 Trel. & Yuncker (1950, 1: 41), i.e., assumed to be the
 LECTOTYPE: MA; 2 ST at ILL: Isern 1331, 1334].-- [This
 species recognized by Trel. & Yuncker, 1950]
 - brachytrichum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 141. 1936. TYPE: Peru, Ayacucho, Estrella. El. 500 m. 8, 14 May 1929. Killip & Smith 22652 (HT: US; IT: ILL).
- * brassii Trel., J. Arnold Arb. 9: 147. 1928. TYPE: New Guinea,
 Papua, Iawarere. El. 350 m. 24 Nov. 1925. Brass 683
 (LECTOTYPE designated herein: A; ILT: ILL).-- [= P.
 macropiper Pennant (fide Chew, 1972)]
 - breve Trel., Contr. U.S. Nat. Herb. 26(2): 38. 1927. TYPE:
 Panama, Canal Zone, between Gamboa and Cruces. Pittier 3787
 (HT: US 678858; PT at ILL: Piper 5944; Stevens 981).-- [= P. taboganum (fide Yuncker, 1950); = P. pseudo-fuligineum (cf. Burger, 1971 and Croat, 1978)]
 - breve var. bellae-vistae Trel., Contr. U.S. Nat. Herb. 26(2):

 39. 1927. TYPE: Panama, Prov. Panamá, Bella Vista. 16 Oct.

 1922. Killip 12045 (HT: US 1167181; IT: ILL; PT at ILL:

 Killip 12004).-- [= P. tobaganum (fide Yuncker); = P. cf.

 pseudo-fuligineum]
 - breve var. divaricatum Trel., Contr. U.S. Nat. Herb. 26(2): 39.

 1927. TYPE: Panama, Canal Zone, Fort Sherman. Maxon &
 Valentine 6986 (HT: US 1180701; IT: ILL).-- [= P. taboganum (fide Yuncker); = P. cf. pseudo-fuligineum]
 - breve var. pallidineurum Trel., Contr. U.S. Nat. Herb. 26(2): 38. 1927. TYPE: Panama, between France Field, Canal Zone and Catival, Colón. Standley 30164 [HT: US 1154564; PT at ILL:

- Killip 12078 (2 sheets); Maxon & Harvey 6591 (cited as
 "659"); Standley 25203, 26382; Stevens 349, 752, 993].-[- P. taboganum (fide Yuncker); P. cf. pseudo-fuligineum]
- breve var. pseudo-fatoanum Trel., Contr. U.S. Nat. Herb. 26(2):

 39. 1927. TYPE: Panama, Canal Zone, Gamboa. Pittier 3709

 (HT: US 678777; PT at ILL: Maxon & Harvey 6504, 6543; Maxon & Valentine 7055; Standley 25565, 25603).-- [-P. taboganum fide Yuncker); -P. cf. pseudo-fuligineum]
- brevestrigillosum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 141. 1936. TYPE: Peru, Ayacucho, Carrapa. El. 1500 m. May 1929. Killip & Smith 22375 (HT: US; IT: ILL).
- <u>brevipedunculum</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 141. 1936. TYPE: Peru, Ayacucho, Estrella. El. 500 m. 8, 14 May 1929. Killip & Smith 22677 (HT: US; IT: ILL).
- brittonorum Trel. in Feddes Repert. Spec. Nov. Regni Veg. 23:

 4, 8. 1926. TYPE: Cuba, Las Tunas, Isle of Pines. Britton,
 Britton & Wilson 14743 (HT: NY; PT at ILL: Ekman 12118,
 12182).
- <u>cabaianum Trel.</u> in Feddes Repert. Spec. Nov. Regni Veg. 23: 307, 311. 1927. TYPE: Haiti, Morne Cabaio, Massif de La Selle. El. 1700 m. 20 Aug. 1924. Ekman 1544 (HT: ILL).
- <u>cabaianum</u> var. <u>obliquifolium</u> Trel. in Feddes Repert. Spec. Nov. Regni Veg. 2⁴: 361. 1928. TYPE: Haiti, Badeau, La Selle. El. 1300 m. 13 March 1927. <u>Ekman</u> 7850 (HT: ILL).
- <u>caballo-cochanum</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 142. 1936. TYPE: Peru, Loreto, Caballo-Cocha. Aug. 1929. Williams 2309 (HT: F 608282; IT: ILL).
- caeruleifolium Trel., Contr. U.S. Nat. Herb. 26(4): 145. 1929.
 TYPE: Costa Rica, Guanacaste, Quebrada Serena, near Tilarán.
 El. 700 m. 27 Jan. 1926. Standley & Valerio 46134 (HT: US 1307425; IT: ILL; PT at ILL: Standley & Valerio 46234).-[= P. aequale (fide Burger, 1971)]
- cajambrense Trel. & Yuncker var. caquetanum Trel. & Yuncker,
 Piperaceae no. S. Amer. 1: 27. 1950. TYPE: Colombia,
 Caquetá, Río Orteguaza. 2 Aug. 1926. Woronow & Juzepczuk
 6364 (HT: ILL).
- <u>calanyanum</u> Trel. & Yuncker, Piperaceae no. S. Amer. 1: 66, fig. 59. 1950. TYPE: Colombia, Caquetá, Quebrada de la Calana. 6 April 1940. <u>Cuatrecasas 9186</u> (HT: US 1795455; PT at ILL: <u>Antonio Camilo</u> 10; <u>Cuatrecasas</u> 10589).

- calciseligens Trel. ex Stehlé, Bull. Soc. Bot. France 84: 411.
 1938 (nomen subnudum); Fl. Descr. Antill. Fr. 2(1): 97. 1940;
 Bull. Agric. Martinique 9(3): 174. 1940. TYPE: Guadeloupe.
 El. 10 m. 5 Feb. 1937. Stehlé & Stehlé 1340 (HT: ?;
 fragments of type at ILL).-- [= P. dilatatum Rich. (fide Howard, 1973)]
 - <u>caliendriferum Trel.</u>, J. Wash. Acad. Sci. 19: 330. 1929. TYPE:
 <u>Mexico</u>, Oaxaca, Cerro de la Raya, Cuyamecalco. El. 2800 m.
 24 June 1909. <u>H. & C. Conzatti & Gomez 2384</u> (HT: F 246912;
 IT: ILL).
 - Calvescens Trel. var. aguanum Trel. in Yuncker, Field Mus. Publ.

 Bot. 9: 278. 1940. TYPE: Honduras, Yoro, Río Aguán, below Coyoles. 29 June 1938. Yuncker, Koepper & Wagner 8124 (HT: ILL).
 - <u>calvescens</u> var. <u>cangrejalense</u> Trel. in Yuncker, Field Mus. Publ. Bot. 9: 278. 1940. TYPE: Honduras, Atlántida, lower slopes of Mt. Cangrejal, 16 July 1938. <u>Yuncker, Koepper & Wagner</u> 8464 (HT: ILL).
 - calvescens var. pedunculatum Trel. in Yuncker, Field Mus. Publ.

 Bot. 17: 342. 1938. TYPE: Honduras, Cortés, Potrerillos.

 31 July 1934. Yuncker 4882 (HT: ILL).
 - <u>calvescens</u> var. <u>potrerillosense</u> Trel. in Yuncker, Field Mus.
 <u>Publ. Bot. 17: 343. 1938 (as v. portrerillosense)</u>. TYPE:
 Honduras, Cortés, Potrerillos. 31 July 1934. <u>Yuncker 4894</u> (HT: ILL).
 - calvescentinerve Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 144. 1936. TYPE: Peru, Junín, Puerto Yessup. El. 400 m. 10-12 July 1929. Killip & Smith 26248 (HT: US; IT: ILL).
 - camiloi Yuncker in Trel. & Yuncker, Piperaceae no. S. Amer.
 1: 64, fig. 57. 1950. TYPE: Colombia, Caquetá, Florencia.
 8 Jan. 1946. Antonio Camilo 11 (HT: ILL).
 - <u>camptostachys</u> Urban var. <u>cuabanum</u> Trel. in Feddes Repert. Spec.
 Nov. Regni Veg. 29: 28. 1931. TYPE: Santo Domingo. <u>Ekman</u>
 12306 (HT: ILL).
 - <u>candicans</u> Sodiro, Anales Univ. Centr. Ecuador 19: 201. 1905.
 <u>TYPE:</u> Ecuador, Esmeraldas. Aug. 1904. <u>Mille s.n.</u> (IT or ST at ILL).-- [= P. cinereum C.DC. (fide Trel. & Yuncker, 1950)]

- canelosense Trel. & Yuncker, Piperaceae no. S. Amer. 1: 264,
 fig. 228. 1950. TYPE: Ecuador, Napo-Pastaza, near Canelos.
 El. 300-400 m. Feb. 1935. Mexia 6857 (HT: US 1619089; IT:
 ILL; PT at ILL: Mexia 7276).
- canescenticaule Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 145. 1936. TYPE: Peru, Loreto, Puerto Arturo. El. 135 m. 24-25 Aug. 1929. Killip & Smith 27726 (HT: US; IT: ILL).
- canescenticaule var. expansum Trel. in Macbr., Field Mus. Publ.

 Bot. 13(No. 357): 145. 1936. TYPE: Peru, Loreto, Puerto
 Arturo. El. 135 m. 24-25 Aug. 1929. Killip & Smith 27717
 (HT: US; IT: ILL).
- <u>canyazasense</u> Trel. in Woodson & Seibert, Ann. Mo. Bot. Gard. 25: 826. 1938. TYPE: Panama, Veraguas, trail between Cañazas and the foot of the Cordillera Central. El. 300-600 m. 8 Feb. 1937. <u>Allen 185</u> (HT: ILL).-- [= P. taboganum (fide Yuncker, 1950); P. pseudo-fuligineum (cf. Burger, 1971)]
- capacibracteum Trel., Contr. U.S. Nat. Herb. 26(4): 183. 1929.

 TYPE: Costa Rica, San José, between Aserri and Tarbaca.
 El. 1200-1700 m. 6 Dec. 1925. Standley 41397 (HT: US 1307249; IT: ILL; PT at ILL: Standley & Valerio 41812, 41861, 43121, 43245, 43246).-- [This species recognized by Burger, 1971]
- cararense Trel. & Yuncker, Piperaceae no. S. Amer. 1: 208, fig. 170. 1950. TYPE: Colombia, Santander, Carare Valley, near Puerto Berrio. 28 March 1935. Haught 1604 (HT: US 1661768; IT: ILL; PT at ILL: Haught 1987, 2192, 2861).
- cararense var. productipes Trel. & Yuncker, Piperaceae no. S. Amer. 1: 209, fig. 171. 1950. TYPE: Colombia, Santander, vicinity of Barranca Bermeja, Amarilla Creek, Magdalena Valley. El. 200 m. 11 July 1936. Haught 1928 (HT: US 1742206; IT: ILL; PT at ILL: Killip 11809).
- <u>cardenasii</u> Trel. in Rusby, Mem. N. Y. Bot. Gard. 7: 223. 1927.
 <u>TYPE: Bolivia</u>, pampas near Lake Rogagua. El. 300 m. 11 Nov. 1921. <u>Cárdenas 1663 [HT: NY; IT: ILL; probable PT (from the type locality) at ILL: <u>Rusby</u> 1688 (the number cited in the protologue is 1685)].-- [- P. <u>aduncum</u> (fide Trel. & Yuncker, 1950)]</u>

- <u>carlosii</u> Trel. & Yuncker, Piperaceae no. S. Amer. 1: 197, fig. 157. 1950. TYPE: Colombia, Cundinamarca, Aguadita. 15 Jan. 1943. Silvano Jorge et al. 181 (HT: ILL).
- carpapatanum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 145. 1936. TYPE: Peru, Junin, Carpapata above Huacapistana.
 E1. 2700-3200 m. 7 June 1929. Killip & Smith 24403 (HT: US; IT: ILL).
- carrapanum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 146. 1936. TYPE: Peru, Ayacucho, Carrapa. El. 1200 m.
 May 1929. Killip & Smith 22425 (cited as 22485) (HT: US 1357399; IT: ILL).
- carrapanum var. lancifolium Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 146. 1936. TYPE: Peru, Junin, Pichis Trail, Eneñas. El. 1600-1900 m. June-July 1929. Killip & Smith 25758 (HT: US; IT: ILL).
- <u>carrilloanum</u> C.DC., Bull. Soc. Bot. Belg. 30(1): 209. 1891.
 <u>Syntypes</u>, probably to be lectotypified: Costa Rica, Route de Carrillo, versant l'Atlantique (Pittier 2525, 2526); bord du bois a General, 600 m (<u>Pittier 3600</u>)-- (<u>fragments of Pittier 2526</u>, from LE, at ILL).-- [This species recognized by Burger, 1971]
- <u>casitense</u> Trel. in Woodson & Schery, Ann. Mo. Bot. Gard. 27: 289. 1940. TYPE: Panama, Chiriquí, vicinity of Casita Alta, Volcán de Chiriquí. El. 1500-2000 m. Woodson, Allen & Seibert 978 (HT: ILL).-- [= P. hispidum (fide Yuncker, 1950 and 1957)]
- castroanum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 221, fig. 182. 1950. TYPE: Colombia, Chocó, Quibdó, Río Atrato. El. ca 60 m. April-May 1931. Archer 1830 (HT: US 1519003; IT: ILL).
- catalinianum Trel. in Standley, Field Mus. Publ. Bot. 18: 335.
 1937. TYPE: Costa Rica, Guanacaste. 28 June 1928. Stork
 2779 (HT: ILL).-- [= P. jacquemontianum (fide Burger, 1971)]
- cataractarum Trel. in Rusby, Mem. N. Y. Bot. Gard. 7: 224. 1927.
 TYPE: Bolivia, cataracts of the Bopi River. El. 3000 ft.
 Sep. 1921. Rusby 672 (HT: NY; IT: ILL).-- [= P. hispidum
 (fide Yuncker, 1955 and 1957)]
- catripense Yuncker in Trel. & Yuncker, Piperaceae no. S. Amer.
 1: 108, fig. 81. 1950. TYPE: Colombia, Chocó, Enseñada,
 Catripe. 13 Jan. 1945. Haught 5432 (HT: ILL).

- caudefactum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 124, fig. 99. 1950. TYPE: Colombia, El Valle, Rio Dígua Valle, Chorrera La Elsa. El. 975 m. 2, 3 April 1939. Killip 34811 (HT: US 1771602; IT: ILL).
- <u>cauranum</u> Trel. ex L. Williams, Explor. Bot. Guayana Venezolana, 175. 1942 (nomen subnudum). TYPE: Venezuela, Bolívar, La Prisión, Media Caura. El. 100 m. 29 March 1939. Williams 11628 (HT: F; IT: ILL).-- [= P. demeraranum (fide Trel. & Yuncker, 1950; Yuncker, 1953, 1957 and 1973)]
- cayoense Trel. ex Standley in Standley & Record, Field Mus.
 Publ. Bot. 12: 407. 1936. TYPE: British Honduras (Belize),
 San Antonio, El Cayo Distr. 6 May 1931. Bartlett 13070 [HT:
 MICH; IT at ILL (2 sheets)].-- [This species recognized by
 Standley & Steyerm., 1952]
- <u>cejanum</u> Trel. & Yuncker, Piperaceae no. S. Amer. 1: 193, fig. 152. 1950. TYPE: Colombia, Antioquia, La Ceja. 6 Dec. 1939. <u>Daniel & Gonzalez 2120</u> (HT: US 1778619; IT: ILL).
- * celatipetiolum Trel. var. brenesii Trel. in Cuf., Archivio Bot.

 Sist. Fitogeog. & Genet. 10: 26. 1934. TYPE: Costa Rica,
 Pacifica, Golfito ad Golfo dulce. 12 April 1930. Brenes 80
 (HT, or LECTOTYPE designated herein: ILL).-- [= P. terrabanum (fide Burger, 1971)]
 - celer Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 147.

 1936. TYPE: Peru, Loreto, Río Itaya. May 1929. Williams

 132 (HT: F 604312; IT: ILL; PT at ILL: Killip & Smith

 27059).
 - <u>centroense</u> Trel. & Yuncker, Piperaceae no. S. Amer. 1: 298, fig. 264. 1950. TYPE: Colombia, Santander, 20 km S of El Centro. El. 100 m. 25 Sep. 1936. <u>Haught 1988</u> (HT: US 1742249; IT: ILL).
 - <u>cernuum</u> Vell. Conc. var. <u>biformipilum</u> Yuncker, Bol. Inst. Bot.
 (Sao Paulo) 3: 21. 1966. TYPE: Brazil, Minas Gerais, Viçosa, road to São Miguel, near km 3-1/2. El. 685 m. 18 Sep. 1930.
 <u>Mexia 5064a</u> (HT: ILL).-- [This variety recognized by Yuncker, 1972]
 - cerro-puntoense Trel. in Woodson & Schery, Ann. Mo. Bot. Gard.

 27: 289. 1940. TYPE: Panama, Chiriquí, trail to Cerro Punta,
 Río Chiriquí Viejo Valley. 29 March 1938. White 52 (HT:
 ILL).-- [= P. hispidum (fide Yuncker, 1950 and 1957)]

- * chalhuapuquianum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 147. 1936. TYPE: Peru, Junin, Hacienda Chalhuapuquio. 6 Dec. 1924. Stevens 104 (HT, or LECTOTYPE designated herein: ILL; PT at ILL: Stevens 106, 144).
 - <u>chanchamayanum</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 148. 1936. TYPE: Peru, Junin, Chanchamayo Valley. El. 1200 m. <u>Schunke 1595</u> (HT: F 627279; PT at ILL: <u>Killip & Smith 22634</u>).
 - chanekii Trel. ex Standley in Standley & Record, Field Mus.
 Publ. Bot. 12: 407. 1936. TYPE: British Honduras (Belize),
 El Cayo. March-June 1933. Chanek 10 (HT: MICH; IT:
 ILL).-- [= P. scabrum Sw. (fide Standl. & Steyerm., 1952); =
 affin. P. hispidum (cf. Howard, 1973)]
 - <u>chiadoense</u> Yuncker in Trel. & Yuncker, Piperaceae no. S. Amer. 1: 337, fig. 307. 1950. TYPE: Colombia, Antioquia, on Río Chiado, 65 km S of Turbo. El. ca 120 m. 7 May 1945. <u>Haught</u> 4642 (HT: US 1709185; IT: ILL).
 - <u>chrysolepidum</u> Trel. in Feddes Repert. Spec. Nov. Regni Veg. 24: 361. 1928. TYPE: Santo Domingo, between Banane and Gros Fignier, Cordillera de Bahoruco, Barahona. El. 500 m. 28 Aug. 1926. Ekman 6760 (HT: ILL).
 - <u>chrysoneurum</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 148. 1936. TYPE: Peru, Loreto, Alto Río Itaya. El. 145 m. Sep.-Oct. 1929. Williams 3207 (HT: F; IT: ILL).
 - cinereonervosum Trel. in Macbr., Field Mus. Publ. Bot. 13(No.
 357): 149. 1936. TYPE: Peru, Loreto, San Antonio.
 El. 110 m. 18 Sep. 1929. Killip & Smith 29380 [HT: US; IT
 (2 sheets-- one leaf each): ILL].
 - cinereoramulum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 149. 1936. TYPE: Peru, Loreto, mouth of Río Santiago. El. 200 m. 17 Nov. 1931. Mexia 6117 (HT: UC; IT: ILL).
 - cirratum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 150. 1936. TYPE: Peru, Loreto, La Victoria on the Amazon River. Aug.-Sep. 1929. Williams 2969 (HT: F 608159; IT: ILL).
 - cisnerosense Trel. & Yuncker, Piperaceae no. S. Amer. 1: 304, fig. 269. 1950. TYPE: Colombia, El Valle, Cisneros. El. 300-500 m. 5 May 1939. Killip 35571 (HT: US 1772274; IT: ILL).

- cispontinum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 150. 1936. TYPE: Peru, Junfn, near Perené Bridge, Rfo Paucartambo Valley. El. 700 m. 19 June 1929. Killip & Smith 25284 (HT: US; IT: ILL).
- claudicans Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 151. 1936. TYPE: Peru, Loreto, Iquitos. El. 100 m.
 3-11 Aug. 1929. Killip & Smith 26938 (HT: US; IT: ILL).
- <u>coactaepilum</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 151. 1936. TYPE: Peru, Junín, Puerto Yessup. El. 400 m. 10-12 July 1929. <u>Killip & Smith 26310</u> (HT: US; IT: ILL).
- <u>cobanense</u> Trel. in Standley, Field Mus. Publ. Bot. 10: 159. 1931. "Honduras, Quebrada Seca, also in Guatemala." No type cited; to be lectotypified?; probably first collected by <u>Standley</u> (see No. <u>53930</u>, one of several authentic specimens at ILL).
- cobanense var. sarculatum Trel., J. Wash. Acad. Sci. 19: 331.

 1929. TYPE: Honduras, Yoro, Quebrada Seca. El. 30 m. Dec.
 1927. Standley 53912 [HT: F 584243; IT (2 sheets): ILL].
- <u>cocornanum</u> Trel. & Yuncker, Piperaceae no. S. Amer. 1: 297, fig. 262. 1950. TYPE: Colombia, Antioquia, Cocorná. 30 July 1937. Daniel 1431 (HT: GH; IT: ILL).
- <u>cocquericotense</u> Trel. ex Standley in Standley & Record, Field Mus. Publ. Bot. 12: 407. 1936. TYPE: British Honduras (Belize), Little Cocquericot, Belize River. 26 March 1933. Lundell 3829 (HT: MICH; IT: ILL).
- colaphitolerans Trel. in Standley, Field Mus. Publ. Bot. 17:
 231. 1937. TYPE: Guatemala, Petén, Lake Petén, Ixlu.
 15 June 1933. Lundell 3827 (HT: ILL).-- [= P. psilorhachis C.DC. (fide Standley & Steyerm., 1952)]
- <u>colemanense</u> Trel. in Standley, Field Mus. Publ. Bot. 18: 337. 1937. TYPE: Costa Rica, Heredia, Potreros near Coleman Finca, above Santo Domingo del Roble. El. 1600 m. 7 Aug. 1936. <u>Dodge</u> & <u>Goerger</u> 9580 (HT: MO; IT: ILL).-- [= P. aequale (fide Burger, 1971)]
- <u>comasense</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 152. 1936. TYPE: Peru, Junín, Río de Comas. El. 2500-2600 m. Weberbauer 6615 (HT: F 628196; IT: ILL).
- comayaguanum Trel. in Yuncker, Field Mus. Publ. Bot. 17: 343.
 1938. TYPE: Honduras, Comayagua, 6 km N of Siguatepeque.
 El. 1300 m. 4 Aug. 1936. Yuncker, Dawson & Youse 6310 (HT: ILL).

- Compactum Trel., Contr. U.S. Nat. Herb. 26(4): 131. 1929. TYPE:
 Costa Rica, San José, near Santa María de Dota. El. 1500-1800 m. Dec. 1925. Standley 41801 (HT: US 1307255; IT: ILL; PT at ILL: Standley & Valerio 43184-- said to be broader-leaved).-- [- P. amalago (cf. Burger, 1971)]
- concinnatoris Yuncker, Bol. Inst. Bot. (São Paulo) 3: 33.
 1966.-- [see Artanthe concinna]
- concinnifolium Trel., Contr. U.S. Nat. Herb. 26(4): 167. 1929.
 TYPE: Costa Rica, Colinas de Piedades, San Ramón.
 El. 1100 m. 4 June 1901. Brenes 14194 (HT: US 716434; PT at
 ILL: Brenes 17765, 17769). -- [= P. aequale (cf. Burger,
 1971)]
- <u>conditum</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 152. 1936. TYPE: Peru, Loreto, Yurimaguas. El. 135 m.
 Aug.-Sep. 1929. <u>Killip & Smith 28208</u> (HT: US; IT: ILL; PT at ILL: <u>Killip & Smith 28090</u>).— [The number of the PT is also the type number for <u>P. perpunctulatum</u> Trel. in Macbr., op. cit. 207]
- conditum var. angustum Trel. in Macbr., Field Mus. Publ. Bot.
 13(No. 357): 152. 1936. TYPE: Peru, Loreto, Yurimaguas.
 El. 135 m. Aug.-Sep. 1929. Killip & Smith 29105 (HT: US; IT: ILL).
- <u>condotoense</u> Trel. & Yuncker, Piperaceae no. S. Amer. 1: 222, fig. 184. 1950. TYPE: Colombia, Chocó, near confluence of the Condoto and San Juan rivers. El. 100-150 m. 30 April 1939. Killip 35086 (HT: US 1771840; IT: ILL).
- conejoense Trel. & Yuncker, Piperaceae no. S. Amer. 1: 46, fig. 35. 1950. TYPE: Colombia, Colombia-Ecuador boundary, Putumayo, junction of the San Miguel and Conejo rivers. E1. 300 m. 8 Dec. 1940. <u>Cuatrecasas</u> 10896 (HT: US 1798165; IT: ILL).
- <u>confusionis</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 152. 1936. TYPE: Peru, Loreto, Yurimaguas to Balsapuerto. El. 135-150 m. 26-31 Aug. 1929. <u>Killip & Smith</u> 28231 (HT: US; IT: ILL).
- conispicum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 153. 1936. TYPE: Peru, Loreto, Santa Rosa. El. 135 m.
 1-5 Sep. 1929. Killip & Smith 28767 (HT: US; IT: ILL).

- constipatispicum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 153. 1936. TYPE: Peru, Loreto, San Antonio. El. 110 m. 18 Sep. 1929. Killip & Smith 29415 (HT: US; IT: ILL; PT at ILL: Killip & Smith 29302, 29442).
- constipatispicum var. lanosum Trel. in Macbr., Field Mus. Publ.

 Bot. 13(No. 357): 153. 1936. TYPE: Peru, Loreto, Iquitos.
 El. 110 m. 3-11 Aug. 1929. Killip & Smith 27467 (HT: US; IT: ILL).
- contamanum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 154. 1936. TYPE: Peru, Loreto, Contamana on Río Ucayali.
 El. 150 m. 29 July 1929. Killip & Smith 26880 (HT: US; IT: ILL).
- conversum Trel. in Woodson & Schery, Ann. Mo. Bot. Gard. 27:
 290. 1940. TYPE: Panama, Chiriquí, Llanos del Volcán.
 El. 1300 m. 23 Jan. 1939. Allen 1550 (HT: ILL).-- [This species upheld by Yuncker, 1950; P. amalago (fide Burger, 1971)]
- <u>cooperi</u> Yuncker in Woodson & Schery, Ann. Mo. Bot. Gard. 37: 21. 1950. TYPE: Panama, Bocas del Toro, vicinity of Almirante, Daytonia Farm. 1928. <u>Cooper 374</u> (HT: US; IT: ILL).-- [= P. fimbriulatum C.DC. (fide Burger, 1971)]
- copacabanense Trel. in Daniel, Una ascensión Cerro "La Vieja",
 14. 1940 (without a Latin diagnosis); Caldasia 1: 88. 1940.
 TYPE: Colombia, Copacabana, near Medellín. 28 April 1934.
 Daniel 279 (HT: US; IT: ILL).-- [= P. bredemeyeri (fide Trel.
 & Yuncker, 1950)]
- <u>corintoananum</u> Yuncker, Bol. Inst. Bot. (São Paulo) 3: 33, fig. 27. 1966. TYPE: Brazil, Minas Gerais, Fazenda do Diamante, Corrego Diamante, Corinto. El. 590 m. 10 April 1931. <u>Mexia</u> 5583-a (HT: ILL).
- <u>correptum</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 154. 1936. TYPE: Peru, Junín, Puerto Bermúdez. El. 375 m.
 14-17 July 1929. <u>Killip & Smith 26524</u> (HT: US; IT: ILL).
- * corylistachyopse Trel., J. Arnold Arb. 9: 147. 1928. TYPE: New Guinea, Papua, Sogeri. El. 450 m. 17 Nov. 1925. Brass 655 (LECTOTYPE, designated herein: A; ILT: ILL).
 - coyolesense Trel. in Yuncker, Field Mus. Publ. Bot. 9: 278.

 1940. TYPE: Honduras, Yoro, near Las Flores, Río Aguán.
 El. 270 m. 30 June 1938. Yuncker, Koepper & Wagner 8147
 (HT: ILL).-- [= P. atlantidanum (fide Standley & Steyerm., 1952); = P. pseudo-fuligineum (cf. Burger, 1971)]

- crassamentum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 155. 1936. TYPE: Peru, Junfn, Puerto Yessup. El. 400 m.
 10-12 July 1929. Killip & Smith 26354 (HT: US; IT: ILL).
- <u>crassicaule</u> Trel. in Yuncker, Field Mus. Publ. Bot. 9: 278.
 1940. TYPE: Honduras, Atlântida, ridge near Roma railroad siding about 25 km E of La Ceiba. El. 240 m. 21 July 1938.
 Yuncker, Koepper & Wagner 8572 (HT: ILL).
- cricamolense Trel. in Woodson & Schery, Ann. Mo. Bot. Gard. 27: 290. 1940. TYPE: Panama, Bocas del Toro, Río Cricamola between Finca St. Louis and Konkintoë. El. ca 10-50 m. Aug. 1938. Woodson, Allen & Seibert 1927 (HT: ILL).-- [This species recognized by Yuncker, 1950]
- crispans Trel. in Standley, Field Mus. Publ. Bot. 18: 339. 1937.
 TYPE: Costa Rica, La Palma de San Ramón. El. 1050 m. Brenes
 5236 [HT: F; fragments of type (Brenes 390 = 5236) at ILL].-[-P. aequale (fide Burger, 1971)]
- crispatimargine Trel. in Standley, Field Mus. Publ. Bot. 18: 339. 1937. TYPE: Costa Rica, Palmira del Naranjo. El. 1850-1900 m. Brenes 3499 [HT: F; fragments of type (Brenes 35 = 3499) at ILL]. [= P. poasanum C.DC. (fide Burger, 1971)]
- cristalinanum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 129, fig. 104. 1950. TYPE: Colombia, El Valle, Río Digua, La Elsa, Quebrada La Cristalina. El. 1000-1150 m. 30 Sep. 1943. Cuatrecasas 15231 (HT or LT: US; IT or ILT: ILL).
- cristicola Trel. in Yuncker, Field Mus. Publ. Bot. 17: 343.
 1938. TYPE: Honduras, Comayagua, in forest at summit of the range above El Achote, near Siguatepeque. El. 1800 m.
 Yuncker, Dawson & Youse 6247 (HT: ILL).
- cryptocarpum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 281, fig. 245. 1950. TYPE: Ecuador, Napo-Pastaza, between Tena and Archidona. El. 400 m. April 1935. Mexia 7132 (HT: US 1619105; IT: ILL; PT at ILL: Isern 1788).
- * <u>cubataonum</u> C.DC., Notizbl. Bot. Gart. Berlin-Dahlem 6: 440.
 1917. TYPE: Brazil, São Paulo, Cubatão. <u>Usteri 3, 14</u>
 [Syntypes: G.-- Yuncker (1973) cited No. <u>14</u> as the holotype, but it is to be regarded as the LECTOTYPE (designated)

- herein). An unnumbered <u>Usteri</u> specimen at ILL (obtained from SP under Access. No. 12631) has the same label data as No. 14 and may be an ILT].—[This species recognized by Yuncker, 1973]
- * cufodontii Trel. in Cuf., Archivio Bot. Sist. Fitogeogr. & Genet. 10: 25. 1934. TYPE: Costa Rica, "Hamburg-Farm, 9 km ab ore flum. Reventazon." El. 15 m. 2 May 1930. Cufodontis 684 (HT, or LECTOTYPE designated herein: ILL).-- [-P. arieianum C.DC. (fide Burger, 1971)]
 - cumanense Kunth var. pubinerve Trel. & Yuncker, Piperaceae no. S. Amer. 1: 237. 1950. TYPE: Colombia, Chocó, Bahía Solano, near Ciudad Mutis. Feb. 1939. Killip & García 33472 (HT: US 1770407; IT: ILL).
 - cumanense var. subvillosum Trel. & Yuncker, Piperaceae no. S.

 Amer. 1: 237. 1950. TYPE: Colombia, Cundinamarca, La Vega, road to Nocaina. El. 950-1200 m. Jan. 1942. García Barriga
 10641 [HT: US 1851617; IT: ILL; PT at ILL: Apolinar María 9; Felipe 104].
- * <u>cumbricola</u> Trel., Trab. Mus. Nac. Ci. Nat. Ser. Bot. 33: 48.

 1936 (without a Latin diagnosis). TYPE: Colombia, La Cumbre. El. 1650 m. <u>Cuatrecasas</u> 2012 and 2427 = syntypes [No. 2012 cited as "type" by Trel. & Yuncker, 1950, 1: 251 (i.e., assumed to be the LECTOTYPE): ILL].-- [= P. <u>aduncum</u> (fide Trel. & Yuncker, 1950; Yuncker, 1950 and 1955)]
 - cumbricola var. montevagum Trel., Trab. Mus. Nac. Ci. Nat. Ser.
 Bot. 33: 48. 1936 (without a Latin diagnosis). TYPE:
 Colombia, Ibagué. El. 1350 m. 8 May 1932. Cuatrecasas 2425
 (HT: MA; fragment of type at ILL).-- [= P. aduncum (fide
 Trel. & Yuncker; 1950)]
 - cundinamarcanum Trel., Trab. Mus. Nac. Ci. Nat. Ser. Bot. 33:
 49. 1936 (without a Latin diagnosis). TYPE: Colombia,
 Cundinamarca, La Esperanza. Cuatrecasas 2420-b (HT: ILL).-[-P. holtonii C.DC. in DC. var. cundinamarcanum (Trel.)
 Trel. & Yuncker, 1950]
 - <u>cuniculorum</u> Trel. & Yuncker, Piperaceae no. S. Amer. 1: 234, fig. 201. 1950. TYPE: Colombia, Putumayo, Columbia-Ecuador boundary, near the confluence of the San Miguel and Conejo rivers. El. 300 m. 8 Dec. 1940. <u>Cuatrecasas</u> 10906 (HT: US 1799101; IT: ILL).
 - cupreatum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 156. 1936. TYPE: Peru, Loreto, Balsapuerto. El. 350-550 m.
 29 Aug. 1929. Killip & Smith 28509 (HT: US; IT: ILL; PT at
 ILL: Killip & Smith 28274, 28784).

- <u>cupreatum</u> var. <u>longum</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 156. 1936. TYPE: Peru, Loreto, Iquitos. El. 100 m. 3-11 Aug. 1929. <u>Killip</u> & <u>Smith</u> <u>27486</u> (HT: US; IT: ILL).
- <u>curvatipes</u> Trel. in Standley, Field Mus. Publ. Bot. 17: 231.
 1937. TYPE: Guatemala, Petén, Lake Petén, Nictun. 4 May
 1933. <u>Lundell 3122</u> (HT: ILL).-- [This species recognized by Standley & Steyern., 1952]
- <u>cyclophyllum</u> Trel. in Standley, Field Mus. Publ. Bot. 10: 159. 1931. Type locality: Honduras, "frequent in wet forest on the high hills above Lancetilla." No type indicated; probably lectotypification needed (authentic specimen at ILL: Standley 52703).
- cyphophyllopse Trel. & Yuncker, Piperaceae no. S. Amer. 1: 334, fig. 303. 1950. TYPE: Ecuador, Los Rios, Cantón Vinces, between Quevedo and Naranjal. El. 60 m. 7, 8 Nov. 1934. Mexia 6673 (HT: US 1619077; IT: ILL).
- cyphophyllopse var. brevipes Trel. & Yuncker, Piperaceae no. S.
 Amer. 1: 335. 1950. TYPE: Ecuador, Los Rios, Cantón Vinces,
 near Quevedo. El. 60 m. Oct.-Nov. 1934. Mexia 6628 [HT: US
 1619072; IT: ILL; PT at ILL, from Colombia: Felipe 93; Killip
 & García 33051, 33111; Antonio Miguel 3, 25; from Ecuador:
 Eggers 14848 (fragment); Rimbach 233].
- cyprium Trel. & Yuncker, Piperaceae no. S. Amer. 1: 115, fig. 89. 1950. TYPE: Colombia, Caldas, above Salento. El. 2000-2500 m. July 1922. Pennell 8925 (HT: US 1142731; IT: ILL).
- daedalum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 156. 1936. TYPE: Peru, Loreto, lower Río Huallaga. El. 155-210 m. Oct.-Nov. 1929. Williams 3861 (HT: F; IT: ILL).
- daniel-gonzalezii Trel. in Daniel, Una ascensión Cerro "La
 Vieja", 13. 1940 (without a Latin diagnosis); Caldasia 1: 87.
 1940. TYPE: Colombia, Antioquia, La Ceja. Daniel 2113
 (cited as 2133) (HT: US 1778612; IT: ILL).-- [This species recognized by Trel. & Yuncker, 1950]
- <u>daniel-gonzalezii</u> var. <u>misellum</u> Trel. & Yuncker, Piperaceae no. S. Amer. 1: 201. 1950. TYPE: Colombia, Antioquia, San Antonio. July 1940. <u>Daniel</u> 2316 [HT: US 1800222; PT at ILL: <u>Daniel</u> 3010 (2 sheets)].

- <u>dawsoni</u> Trel. in Yuncker, Field Mus. Publ. Bot. 17: 343. 1938.
 <u>TYPE</u>: Honduras, Comayagua, El Achote, above Siguatepeque.
 El. 1350 m. 3 Aug. 1936. <u>Yuncker</u>, <u>Dawson</u> & <u>Youse</u> 6283 (HT: ILL).
- <u>deamii</u> Trel. var. <u>yojoanum</u> Trel. in Yuncker, Field Mus. Publ. Bot. 17: 344. 1938. TYPE: Honduras, Paral, Lake Yojoa. El. 630 m. 30 July 1934. Yuncker 4875 (HT: ILL).
- debilicaule Trel. & Yuncker, Piperaceae no. S. Amer. 1: 333, fig. 302. 1950. TYPE: Ecuador, Esmeraldas, Parroquia Concepción, Playa Rica. El. 105 m. 7 Dec. 1936. Mexia 8411 (HT: US 1778418; IT: ILL).
- decorticans Trel. & Yuncker, Piperaceae no. S. Amer. 1: 125, fig. 100. 1950. TYPE: Colombia, El Valle, 18 km E of Buenaventura. El. ca 50 m. 14 Feb. 1939. Killip & García 33236 (HT: US 1770196; IT: ILL).
- dedititium Trel., J. Wash. Acad. Sci. 19: 331. 1929. TYPE:
 Honduras, Yoro, Quebrada Seca. El. 30 m. Dec. 1927.
 Standley 53937 (HT: F; IT: ILL).-- [= P. jacquemontianum (fide Burger, 1971)]
- deflexispicum Trel., Contr. U.S. Nat. Herb. 26(4): 144. 1929.

 TYPE: Costa Rica, Alajuela, Viento Fresco. El. 1600-1900 m.
 13 Feb. 1926. Standley & Torres 47764 (HT: US 1307512; PT at ILL: Standley & Torres 47576, 51349; Standley & Valerio 49899).-- [= P. gibbosum C.DC. (fide Burger, 1971)]
- <u>delatum</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 157.
 1936. TYPE: Peru, Loreto, Puerto Arturo. El. 135 m.
 24-25 Aug. 1929. <u>Killip & Smith</u> 27713 (HT: US; IT: ILL).
- deltoideocarpum Trel. in Yuncker, Field Mus. Publ. Bot. 17: 344.

 1938. TYPE: Honduras, Comayagua, river bank near
 Siguatepeque. El. 1050 m. 5 July 1936. Yuncker, Dawson &
 Youse 5654 (HT: ILL).
- <u>dendropse</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 158. 1936. TYPE: Peru, Junín, La Merced. El. 700 m. May-June 1929. <u>Killip & Smith 23488</u> (HT: US; IT: ILL).
- depressibaccum Trel. in Feddes Repert. Spec. Nov. Regni Veg.
 23: 306, 310. 1927. TYPE: Haiti, Port-de-Paix, Haut-Piton.
 El. 1000 m. 20 Sep. 1925. Ekman 4890 (HT: ILL).
- desultorium Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 158. 1936. TYPE: Peru, Junín, Schunke Hacienda, above San Ramón, La Merced. El. 1400-1700 m. 8-12 June 1929. Killip & Smith 24654 (HT: US; IT: ILL).

- detonsum
 Trel., Contr. U.S. Nat. Herb. 26(4): 141. 1929. TYPE:

 Costa Rica, Guanacaste, near Tilarán. El. 500-650 m.

 Jan. 1926. Standley & Valerio 44314 (HT: US 1307305; IT:

 ILL; Pt at ILL: Standley & Valerio 44451, 44601, 44765,

 45877).-- [= P. glabrescens (Miq.) C.DC. in DC. (fide Burger, 1971)]
- diazanum Trel., Contr. U.S. Nat. Herb. 26(2): 34. 1927. TYPE:

 Panama, Prov. Panamá, E of Juan Diaz. Killip 3114 [HT: US 836136; IT: ILL; PT at ILL: Maxon 6843; Maxon & Valentine 7012 (2 sheets); Standley 26006].-- [= P. leptocladum C.DC. (fide Yuncker, 1950); = P. dilatatum Rich. (cf. Burger, 1971)]
- diazanum var. viae-kobeanae Trel. in Woodson & Schery, Ann. Mo. Bot. Gard. 27: 290. 1940. TYPE: Panama, Canal Zone, Fort Kobe Road. 22 July 1938. Woodson, Allen & Seibert 1412 (HT: ILL).-- [= P. leptocladum (fide Yuncker, 1950); = P. dilatatum (cf. Burger, 1971)]
- dichroostachyum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 294, fig. 260. 1950. TYPE: Colombia, El Valle, El Silencia, Yanaconas. El. 1900-2200 m. 28 Feb. 1939. Killip & García 33824 (HT: US 1770703; IT: ILL; PT at ILL: Fosberg 19626).
- dichroostachyum var. mayasqueranum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 295. 1950. TYPE: Colombia, Nariño, trail between Mayasquer and Tambo. El. 3000 m. 2 Aug. 1935. Mexia 7577 (HT: CH; IT: ILL).
- dilatatifolium Trel. & Yuncker, Piperaceae no. S. Amer. 1: 267, fig. 232. 1950. TYPE: Venezuela, Fed. Distr., Bosque de Catuche. Pittier 6136 (HT: US 601867; PT at ILL: Colombia, Killip 34463).
- * dilatatum Rich. var. broadwayi Trel. ex Stehlé, Bull. Soc. Bot.
 France 83: 627. 1936 (nomen subnudum-- as "broawayi"). TYPE:
 Guadeloupe. Jan. 1929. Trelease 69 (LECTOTYPE design. by
 Howard, 1973: ILL; ILT: ILL).-- [= P. dilatatum (fide
 Howard, 1973)]
- * dilatatum forma diamantense Trel. ex Stehlé, Fl. Descr. Antill.
 Fr. 2(1): 96. 1940; Bull. Agric. Martinique 9(3): 173. 1940.
 TYPE: Martinique, Diamant. El. 100 m. 29 March 1939.
 Stehlé & Stehlé 3215 (LECTOTYPE, designated by Howard, 1973:
 ILL).-- [- P. dilatatum (fide Howard, 1973)]

- * dilatatum forma vauclinii Trel. ex Stehlé, Fl. Descr. Antill.

 Fr. 2(1): 94. 1940; Bull. Agric. Martinique 9(3): 171. 1940.

 TYPE: Martinique. El. 562 m. 8 March 1939. Stehlé & Stehlé

 3208 (LECTOTYPE, designated by Howard, 1973: ILL). -- [-P.

 dilatatum (fide Howard, 1973)]
 - dimorphophyllum Trel. ex Standley in Standley & Record, Field
 Mus. Publ. Bot. 12: 407. 1936. TYPE: British Honduras
 (Belize), Sibun River, Craig Point. 15 Nov. 1934. Gentle
 1387 (HT: MICH; IT: ILL).-- [= P. aeruginosibaccum (fide
 Standley & Steyerm., 1952); = P. jacquemontianum (cf. Burger,
 1971)]
 - discolor Trel. in Standley, Field Mus. Publ. Bot. 17: 231. 1937, non Sw. (1797)-- the specimens are labelled "P. discolorum". TYPE: Guatemala, Petén, La Libertad. 7 April 1933. Lundell 2565 (HT: ILL; PT at ILL: Lundell 4886).-- [= P. aeruginosibaccum (fide Standley & Steyerm., 1952); = P. jacquemontianum (cf. Burger, 1971)]
 - discriminatum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 341, fig. 313. 1950. TYPE: Colombia, Santander, vicinity of Las Vegas. Killip & Smith 16051 (HT: GH; IT: ILL; PT at ILL: Killip & Smith 16137).
 - dispansum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 159. 1936. TYPE: Peru, Junín, Puerto Bermúdez. El. 375 m.
 24-25 Aug. 1929. Killip & Smith 26434 (HT: F 607559; PT at ILL: Killip & Smith 27612, 27684, 27882).
 - disparipes Trel., Contr. U.S. Nat. Herb. 26(4): 162. 1929.

 TYPE: Costa Rica, Guanacaste, El Silencio, Tilarán.
 El. 750 m. 13 Jan. 1926. Standley & Valerio 44766 (HT: US 1307327; IT: ILL).-- [* P. umbricola C.DC. (fide Burger, 1971)]
 - dissimulans Trel., Contr. U.S. Nat. Herb. 26(4): 133. 1929.

 TYPE: Costa Rica, Las Vueltas, Tucurrique. El. 635 m.

 Nov. 1898. Tonduz 12773 (HT: US 798447; PT at ILL: Standley & Valerio 46718). [= P. papantlense C.DC. in DC. (fide Burger, 1971)]
 - distichum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 206, fig.

 167. 1950. TYPE: Colombia, Chocó, Bahía Solano, along
 Quebrada Jellita. El. 50-100 m. 22 Feb. 1939. Killip &
 García 33556 (HT: US 1770479; IT: ILL; PT at ILL: Haught
 4786).
 - diversipilum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 159. 1936. TYPE: Peru, Huánuco, Pozuzo. El. 600 m. 20-22
 June 1923. Macbride 4666 (HT: F 535740; IT: ILL).

- divortans Trel. & Yuncker, Piperaceae no. S. Amer. 1: 189, fig. 148. 1950. TYPE: Colombia, Antioquia, Cocorná. 27 Dec. 1939. Daniel & González 2119 (HT: US 1778618; IT: ILL; PT at ILL: Cuatrecasas 4794; Felipe 37; Silvano Jorge 228; Silvano Jorge & Alfonso 5).
- dotanum Trel., Contr. U.S. Nat. Herb. 26(4): 165. 1929. TYPE:

 Costa Rica, San José, Santa María de Dota. El. 1500-1800 m.

 Dec. 1925. Standley 41739 (HT: US 1307252; IT: ILL; PT at

 ILL: Standley 41849).-- [This species recognized by Burger,

 1971]
- duidaense Trel. var. bolivianum Yuncker, Lilloa 27: 162, pl. 42
 [1953] 1955. TYPE: Bolivia, La Paz, Hacienda Simaco, along road to Tipuani. El. 1400 m. March 1920. Buchtien 5370
 (HT: US 1176612; IT: ILL; PT at ILL: Buchtien 601).
- dulce Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 160.
 1936. TYPE: Peru, Junín, La Merced. El. 700 m. May-June
 1929. Killip & Smith 23705 (HT: US; IT: ILL).
- dussii C.DC. var. dugommierianum Trel. ex Stehlé, Bull. Soc.
 Bot. France 84: 411. 1938 (nomen subnudum); Fl. Descr.
 Antill. Fr. 2(1): 112. 1940 (as forma); Bull. Agric.
 Martinique 9(3): 189, tab. 8. 1940. TYPE: Guadeloupe.
 5 Dec. 1936. Stehlé & Stehlé 1292 (HT: NY; IT: ILL).-[- P. hispidum (fide Howard, 1973)]
- echeverrianum Trel., Contr. U.S. Nat. Herb. 26(4): 172. 1929.

 TYPE: Costa Rica, Echeverría. May 1890. Pittier 2547 [HT: US 796295; fragment of type (leaf) at ILL].-- [- P. dilatatum (fide Burger, 1971)]
- ecuadorense Sodiro, Anales Univ. Centr. Ecuador 13: 859. 1898;

 Piperaceas ecuator, 145. 1900; Fl. Ecuator. Monogr. 1, Ed. 2, 147. 1901. TYPE: Ecuador, Mt. Pichincha, Sodiro s.n. (HT: B; IT: ILL).-- [This species recognized by Trel. & Yuncker, 1950]
- edurum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 160.

 1936. TYPE: Peru, Ayacucho, Aina. El. 750-1000 m.

 7, 17 May 1929. Killip & Smith 22618 (HT: US; IT: ILL; PT at ILL: Killip & Smith 22566, 24325).
- edwallii Yuncker, Bol. Inst. Bot. (São Paulo) 3: 36, fig. 30.

 1966. TYPE: Brazil, São Paulo, Conceição de Itanhaém.

 5 Nov. 1891. Loefgren & Edwall 1668 (HT: ILL).-- [This species upheld by Yuncker, 1972]

- ejuncidum Trel., Contr. U.S. Nat. Herb. 26(4): 164. 1929. TYPE:

 Costa Rica, Heredia, Cerro de las Caricias above San Isidro.

 El. 2300 m. 11 March 1926. Standley & Valerio 52220 (HT: US 1307670; PT at ILL: Standley & Valerio 49773, 49784, 50260).-- [- P. carpinteranum C.DC. (fide Burger, 1971)]
- elasmophyllum Trel. in Yuncker, Field Mus. Publ. Bot. 9: 278.

 1940. TYPE: Honduras, Atlantida, lower slopes of Mt.

 Cangrejal. 16 July 1938. Yuncker, Koepper & Wagner 8461

 (HT: ILL).-- [= P. atlantidanum (fide Standley & Steyerm.,

 1952); = P. pseudo-fuligineum (cf. Burger, 1971)]
- el-bancoanum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 90.

 1950. TYPE: Colombia, Norte de Santander, El Banco, at the confluence of Cubugón and Cobaria rivers. El. 320 m.

 15 Nov. 1941. Cuatrecasas 13158 (HT: US 1850052; PT at ILL: Cuatrecasas 11281, 13129; Nicéforo 202).
- el-caranyanum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 246, fig. 214. 1950. TYPE: Colombia, Norte de Santander, Río Cubugón Valley, between El Caraño and El Indio. El. 470-600 m. 12 Nov. 1941. Cuatrecasas 13015 (HT: US 1850452; IT: ILL).
- elliptico-oblongifolium Trel. in Rusby, Mem. N.Y. Bot. Gard. 7:

 224. 1927. TYPE: Bolivia, Bopi River Valley. El. 3000 ft.

 15 Sep. 1921. Rusby 671 (HT: NY; IT: ILL).-- [= P.
 buchtienii C.DC. var. charopampanum (C.DC.) Yuncker (1955)]
- el-metanum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 160, fig. 139. 1950. TYPE: Colombia, Meta, Villavicencio. El. 500 m. 19 Jan. 1939. Haught 2539 (HT: US 1707140; IT: ILL; PT at ILL: Nicéforo 200).
- elongatifolium Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 161. 1936. TYPE: Peru, Junín, La Merced. El. 600 m. 10-24 Aug. 1923. Macbride 5287 (HT: F 536312; IT: ILL; PT at ILL: Killip & Smith 25113, 25124).
 - elongatum Vahl var. pampayacuanum Trel. in Macbr., Field Mus.

 Publ. Bot. 13(No. 357): 162. 1936 (as pampayacusum, apparently a misprinting vs. spelling in Trelease's handwriting on the sheet at ILL). TYPE: Peru, Huánuco, Pampayacu, at mouth of Río Chinchao. El. 1100 m. 19-25 July 1923. Macbride 5047 (HT: F; IT: ILL).
- emancipationis Trel. in Standley, Field Mus. Publ. Bot. 17: 231.
 1937. TYPE: Guatemala, Petén, La Libertad. 7 June 1933.
 Lundell 3658 (HT: ILL).-- [= P. aeruginosibaccum (fide Standley & Steyerm., 1952); = P. jacquemontianum (fide Burger, 1971)]

- emancipationis var. longum Trel. in Standley, Field Mus. Publ.

 Bot. 17: 232. 1937. TYPE: Guatemala, Petén, La Libertad.

 27 April 1933. Lundell 3052 (HT: ILL).-- [= P.
 aeruginosibaccum (fide Standley & Steyerm., 1952); = P.
 jacquemontianum (fide Burger, 1971)]
- emollitum Trel., Contr. U.S. Nat. Herb. 26(4): 181. 1929. TYPE:

 Costa Rica, Guanacaste, El Silencio, Tilarán. El. 750 m.

 13 Jan. 1926. Standley & Valerio 44650 (HT: US 1307315; PT at ILL: Standley & Valerio 44637, 46205).-- [= P. bisasperatum (fide Burger, 1971)]
- enenyasense Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):

 163. 1936. TYPE: Peru, Junín, Pichis Trail, Eneñas.
 El. 1600-1900 m. June-July 1929. Killip & Smith 25646 (HT: US; IT: ILL).-- [This collection was filed by Trelease with and is also cited as a PT of P. lanosicaule Trel. in Macbr., op. cit. 181.]
- enganyanum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 292, fig. 258. 1950. TYPE: Colombia, El Valle, Río Digua Valley along Río Engaña. El. ca 675 m. April 1939. Killip 34750 (HT: US 1771547; IT: ILL).
- entradense Trel. & Yuncker, Piperaceae no. S. Amer. 1: 40. 1950.

 TYPE: Ecuador, Guayas, Entrada. 27 June 1942. Haught 3357
 (HT: US 1708091; IT: ILL).
- eocenicum Trel. in Feddes Repert. Spec. Nov. Regni Veg. 23: 307, 311. 1927. TYPE: Haiti, Morne Basil, l'Artibonite. El. 1300-1450 m. 15 Nov. 1924. Ekman 2502 (HT: ILL).
- eocenicum var. cahosense Trel. in Feddes Repert. Spec. Nov.
 Regni Veg. 24: 362. 1928. TYPE: Haiti, Morne Lagonne, Los
 Cahos. El. 1200 m. 22 Feb. 1926. Ekman 5604 (HT: ILL).
- epilosipes Trel. in Yuncker, Field Mus. Publ. Bot. 17: 344.

 1938. TYPE: Honduras, Comayagua, El Achote, above
 Siguatepeque. El. 1350 m. 3 Aug. 1936. Yuncker, Dawson &
 Youse 6296 (HT: ILL).
- epilosipes var. heterophyllum Trel. in Yuncker, Field Mus. Publ.

 Bot. 17: 345. 1938. TYPE: Honduras, El Achote, above
 Siguatepeque. El. 1350 m. 26 July 1936. Yuncker, Dawson &
 Youse 6097 (HT: ILL).
- erectipilum Yuncker, Bol. Inst. Bot. (São Paulo) 3: 95, fig. 82.

 1966. TYPE: Brazil, Pará, Gurupá. 3 Nov. 1929. Killip &
 Smith 30578 (HT: US 1463602; IT: ILL; PT at ILL: Killip &
 Smith 30609).-- [This species upheld by Yuncker, 1973]

- erubescentispicum Trel. in Woodson & Schery, Ann. Mo. Bot. Gard.

 27: 291. 1940 (as erubescentispica). TYPE: Panama, Bocas
 del Toro, vicinity of Nievecita. El. 0-50 m. Aug. 1938.

 Woodson, Allen & Seibert 1817 (HT: ILL).-- [This species
 recognized by Yuncker, 1950]
- estrellense C.DC. in DC., Prodromus 16(1): 272. 1869, including var. pilosius (Miq.) C.DC. in DC., loc. cit.-- [see Artanthe fuscescens]
- euryphyllum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):

 163. 1936. TYPE: Peru, Junín, E of Quimirí Bridge, near La
 Merced. El. 800-1300 m. 1-3 June 1929. Killip & Smith
 23891 (cited as 29891) (HT: US 1358464; IT: ILL).-- [This
 species recognized by Burger, 1971]
- evasum Trel., Contr. U.S. Nat. Herb. 26(4): 155. 1929. TYPE:
 Costa Rica, Guanacaste, El Arenal. El. 500 m. 18 Jan. 1926.
 Standley & Valerio 45280 (HT: US 1307366; IT: ILL).-- [= P.
 imperiale (fide Burger, 1971)]
- evulsipilosum Trel. in Yuncker, Field Mus. Publ. Bot. 9: 279.
 1940. TYPE: Honduras, Atlántida, La Ceiba. 25 June 1938.
 Yuncker, Koepper & Wagner 8015 (HT: ILL).
- ewanii Yuncker in Trel. & Yuncker, Piperaceae no. S. Amer. 1: 278, fig. 240. 1950. TYPE: Colombia, Putumayo, near San Diego de Colorado...between Umbria and Puerta Asis. 11 Jan. 1945. Ewan 16752 (HT: ILL).
- excultum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 164. 1936. TYPE: Peru, San Martín, San Roque. El. 13501500 m. Jan.-Feb. 1930. Williams 7461 (HT: F 623031; IT: ILL).
- exigens Trel. in Yuncker, Field Mus. Publ. Bot. 17: 345. 1938.

 TYPE: Honduras, Comayagua, El Achote, above Siguatepeque.
 El. 1350 m. 26 July 1936. Yuncker, Dawson & Youse 6124 (HT: ILL).
- exigens var. subovatum Trel. in Yuncker, Field Mus. Publ. Bot.

 17: 345. 1938. TYPE: Honduras, El Achote, above
 Siguatepeque. El. 1350 m. 21 July 1936. Yuncker, Dawson &
 Youse 5997 (HT: ILL).
- expolitum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 164. 1936. TYPE: Peru, Loreto, Iquitos. El. 120 m.
 Oct. 1929. Williams 3590 (HT: F 618287; IT: ILL; PT at ILL:
 Killip & Smith 26897, 27228).

- factum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 165.

 1936. TYPE: Peru, Loreto, Yurimaguas. El. 135 m. Aug.-Sep.
 1929. Killip & Smith 27588 (HT: US; IT: ILL).
- fagifolium Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):

 165. 1936. TYPE: Peru, Loreto, Santa Rosa. El. 155-210 m.
 Oct.-Nov. 1929. Williams 4782 (HT: F 629670; IT: ILL; PT at ILL: Killip & Smith 28743).
- fagopyricarpum Trel. in Woodson & Schery, Ann. Mo. Bot. Gard.

 28: 426. 1941. TYPE: Panama, Chiriquí, vicinity of Puerto
 Armuelles. El. 0-75 m. July 1940. Woodson & Schery 852
 (HT: ILL).-- [= P. darienense C.DC. (fide Yuncker, 1950)]
- falanense Trel. & Yuncker, Piperaceae no. S. Amer. 1: 268, fig. 233. 1950. TYPE: Colombia, Tolima, Falán, canyon of the Río Gualí, road between Fresno and Falán. El. 1120-1700 m. 5 Dec. 1939. García Barriga 8333 (HT: US 1774154; PT at ILL: Ewan 16837; Haught 5573; Killip & García 33292).
- falcigerum Trel., Contr. U.S. Nat. Herb. 26(4): 147. 1929.

 TYPE: Costa Rica, Guanacaste, El Silencio, Tilarán.
 El. 750 m. 13 Jan. 1926. Standley & Valerio 44747 (HT: US 1307323; IT: ILL; PT at ILL: Standley & Valerio 45817).-[-P. terrabanum (fide Burger, 1971)]
- falculispicum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 216, fig. 179. 1950. TYPE: Ecuador, Napo-Pastaza, trail from Tena to Archidona. El. 400 m. 2 April 1935. Mexia 7129 (HT: US 1619104; IT: ILL; PT at ILL: Mexia 7230).
- fallens Trel., J. Wash. Acad. Sci. 19: 332. 1929. TYPE:

 Honduras, Atlantida, Lancetilla Valley near Tela. Standley
 53968 (HT: F 583884; IT: ILL).-- [This species recognized by
 Standley & Steyerm., 1952; = P. near urostachyum Hemsley (cf.
 Burger, 1971: 188)]
- fastiditum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 299, fig. 265. 1950. TYPE: Colombia, Santander, vicinity of Charta. El. 2000-2600 m. Feb. 1927. Killip & Smith 19102 (HT: US 1354402; IT: ILL; PT at ILL: Killip & Smith 16559, 16671, 17057, 18873, 18920, 19011, 19146).

- fastiditum var. pubescens Trel. & Yuncker, Piperaceae no. S.

 Amer. 1: 299. 1950. TYPE: Colombia, Santander, wooded banks of Río de la Baja, below La Baja. El. 2200-2300 m. 26 Jan. 1927. Killip & Smith 18283 (HT: US 1353720; IT: ILL).
- faviculiferum Trel. in Yuncker, Field Mus. Publ. Bot. 17: 345, pl. 11. 1938. TYPE: Honduras, Comayagua, El Achote, above Siguatepeque. El. 1350 m. 7 Aug. 1936. Yuncker, Dawson & Youse 6368 (HT: ILL).-- [= P. alveolatifolium (fide Standley & Steyerm., 1952); = P. bredemeyeri (cf. Burger, 1971)]
- fenianum Trel., J. Wash. Acad. Sci. 16: 204. 1926. TYPE:

 Mexico, Chiapas, Hacienda Fenix. 1925. Purpus 386 (HT: US 1209377; IT: ILL).
- figlinum Trel., Contr. U.S. Nat. Herb. 26(4): 142. 1929. TYPE:

 Costa Rica, San José, vicinity of Santa María de Dota.

 El. 1500-1800 m. Standley & Valerio 43112 (HT: US 1307280;

 IT: ILL).-- [= P. glabrescens (fide Burger, 1971)]
- * firmifolium Trel. in Yuncker, Field Mus. Publ. Bot. 17: 346.

 1938. TYPE: Honduras, Comayagua, near El Rincon, about 10
 miles west of Siguatepeque. El. 1400-1500 m. 24 July, 1936.

 Yuncker, Dawson & Youse 6048 (LECTOTYPE designated herein:
 ILL; ILT: ILL).
 - flagellicuspe Trel. & Yuncker, Piperaceae no. S. Amer. 1: 58,
 fig. 49. 1950. TYPE: Ecuador, Napo-Pastaza, near Archidona.
 E1. 650 m. April 1935. Mexia 7268 (HT: US 1619112; IT: ILL;
 PT at ILL: Mexia 8492).
 - flagellicuspe var. villosulum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 59. 1950. TYPE: Colombia, Chocó, Quibdó, Río Atrato. El. ca 60 m. April-May 1931. Archer 1915 (HT: US 1519059; IT: ILL; PT at ILL: Killip 35412).
- * flavifructum Trel., J. Arnold Arb. 9: 147. 1928. TYPE: New Guinea, Papua, Domara River. 4 June 1926. Brass 1644 (LECTOTYPE designated herein: A; ILT: ILL).-- [= P. caninum Blume (fide Chew, 1972)]
 - fluvii-initii Trel. in Woodson & Schery, Ann. Mo. Bot. Gard. 27:
 291. 1940. TYPE: Panama, Chiriqui, trail from Cerro Punta to
 headwaters of Rio Caldera. El. 2250-2500 m. 14 Jan. 1939.
 Allen 1445 (HT: ILL).-- [= P. petaresanum C.DC. (fide
 Yuncker, 1950)]
 - fontium Trel. in Feddes Repert. Spec. Nov. Regni Veg. 23: 307, 311. 1927. TYPE: Haiti, Morne Tourrise, Port-de-Paix. El. 50 m. 24 March 1925. Ekman 3571 (HT: ILL).

- fortalezanum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):

 166. 1936. TYPE: Peru, Loreto, lower Río Huallaga,
 Fortaleza. El. 155-210 m. Oct.-Nov. 1929. Williams 4351
 (HT: F 629586; IT: ILL; PT at ILL: Killip & Smith 26281).
- * fragrans Trel., J. Arnold Arb. 9: 147. 1928. TYPE: New Guinea, Papua, Iawarere. El. 550 m. 25 Nov. 1925. Brass 701 (LECTOTYPE designated herein: A; ILT: ILL).
 - fraguanum Trel., J. Wash. Acad. Sci. 19: 332. 1929. TYPE:
 Honduras, Atlántida, La Fragua. 7 Feb. 1928. Standley 55730
 (HT: F; IT: ILL).-- [This species recognized by Standley & Steyerm., 1952; = P. sancti-felicis Trel. (fide Burger, 1971)]
 - fraguanum var. viride Trel. in Yuncker, Field Mus. Publ. Bot.

 17: 346. 1938. TYPE: Honduras, Lancetilla Valley. El. 27 m.

 5 Aug. 1934. Yuncker 4918 (HT: ILL).-- [= P. sancti-felicis (fide Burger, 1971)]
 - fresnoense Trel. & Yuncker, Piperaceae no. S. Amer. 1: 237, fig. 204. 1950. TYPE: Colombia, Tolima, El Fresno. El. 1480 m. 7 May 1940. Cuatrecasas 9384 (HT: US 1795883; PT at ILL: Silvano Jorge 227).
 - friedrichsthalii C.DC. in DC., Prodromus 16(1): 327. 1869. TYPE:
 "In Guatemala Orosi (Friedrichsthal, n. 1424! in h.
 Vindob.)." [HT: ?; IT: ILL (obtained from W)].-- [This
 species recognized by Standley & Steyerm., 1952, who pointed
 out that the type locality actually is in Costa Rica; see
 also Burger, 1971]
 - frijolesanum Trel. [ined.?] var. grandifolium Trel. in Woodson & Schery, Ann. Mo. Bot. Gard. 27: 291. 1940. TYPE: Panama, Coclé, El Valle. El. 600-1100 m. 8 Dec. 1938. Allen 1193 (HT: ILL).-- [= P. imperiale (fide Yuncker, 1950)]
 - fulvescenticaule Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 167. 1936. TYPE: Peru, Loreto, Balsapuerto. El. 150-350 m. 28-30 Aug. 1929. Killip & Smith 28574 (HT: US; IT: ILL).
 - furcatipilosum Yuncker in Trel. & Yuncker, Piperaceae no. S.

 Amer. 1: 112, fig. 85. 1950. TYPE: Venezuela, Mérida...along
 Quebrada of Cuesta del Barro and Mesa del Trapiche...between
 Canaguá and El Molino. El. 2530-2715 m. 11 May 1944.
 Steyermark 56472 (HT: F 1222765; IT: ILL).

- furiae Trel., Trab. Mus. Nac. C1. Nat. Ser. Bot. 33: 49. 1936
 (without a Latin diagnosis). TYPE: Colombia, Bogotá,
 Quebrada de la Vieja. E1. 2750 m. 22 April 1932.

 Cuatrecasas 2421 (HT: ILL).-- [- P. artanthe (fide Trel. & Yuncker, 1950)]
- gamboanum (C.DC.) C.DC. var. yapense Trel. in Woodson & Schery, Ann. Mo. Bot. Gard. 27: 291. 1940. TYPE: Panama, Darién, vicinity of Yape. El. ca 30 m. 4 Oct. 1938. Allen 854 (HT: ILL).-- [= P. villiramulum C.DC. (fide Yuncker, 1950)]
- gaudichaudianum Kunth var. minor Yuncker, Bol. Inst. Bot. (São Paulo) 3: 39, fig. 33. 1966. TYPE: Brazil, Rio de Janeiro, Guanabara, estrada do Corcovado. 23 Sep. 1958. Pereira, Liene, Benjamin & Duarte 4337 (HT: HB; PT at ILL: Dusen 8234).-- [This variety upheld by Yuncker, 1972]
- gentlei Trel. ex Standley in Standley & Record, Field Mus. Publ.
 Bot. 12: 407. 1936. TYPE: British Honduras (Belize),
 Corozal, San Andrés. Gentle 1077 (HT: MICH; IT: ILL).-[= P. aeruginosibaccum (fide Standley & Steyerm., 1952);
 = P. jacquemontianum (cf. Burger, 1971)]
- gigas Trel. in Woodson & Schery, Ann. Mo. Bot. Gard. 27: 292.
 1940. TYPE: Panama, Chiriquí, vicinity of Casita Alta,
 Volcán de Chiriquí. El. 1500-2000 m. 1938. Woodson, Allen
 & Seibert 846 (HT: ILL).-- [= P. imperiale (fide Yuncker,
 1950)]
- gilvescens Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 167. 1936. TYPE: Peru, Junín, Cahuapanas, on Río Pichis. El. 340 m. 20-21 July 1929. Killip & Smith 26784 (HT: US; IT: ILL).
- glaberrimicaule Trel. in Macbr., Field Mus. Publ. Bot. 13(No.
 357): 168. 1936. TYPE: Peru, Ayacucho, Estrella. El. 500 m.
 8, 14 May 1929. Killip & Smith 22624 (HT: US; IT: ILL).
- glabribaccum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 168. 1936. TYPE: Peru, Junín, La Merced. El. 600 m. 10-24 Aug. 1923. Macbride 5335 (HT: F 536362; IT: ILL).
- glandulosissimum Yuncker, Bol. Inst. Bot. (São Paulo) 3: 40, fig. 34. 1966. TYPE: Brazil, Pará, Belém. Oct.-Nov. 1929. Killip & Smith 30260 (HT: US 1356446; PT at ILL: Killip & Smith 30218).-- [This species upheld by Yuncker, 1972]

- gleasonii Yuncker in Maguire & Collaborators, Bull. Torrey Bot.
 Club 75: 287. 1948. TYPE: British Guiana (Guyana),
 Rockstone. Gleason 857 (HT: NY; PT at ILL: Suriname, Maguire
 24112, 24170).-- [This species recognized by Trel. & Yuncker,
 1950 and Yuncker, 1957]
- goergeri Trel. in Standley, Field Mus. Publ. Bot. 18: 344. 1937.
 TYPE: Costa Rica, Finca Castilla, Río Reventazon. El. 30 m.
 27 July 1936. Dodge & Goerger 9421 (HT: MO; IT: ILL).-[= P. friedrichsthalii (fide Burger, 1971)]
- gonagricum Trel., Contr. U.S. Nat. Herb. 26(4): 171. 1929.
 TYPE: Costa Rica, Heredia, Yerba Buena, above San Isidro.
 El. 2000 m. Feb. 1928. Standley & Valerio 49082 (HT: US 1307566; IT: ILL).-- [= P. hispidum (fide Burger, 1971)]
- gorgonae-insulae Trel. & Yuncker, Piperaceae no. S. Amer. 1:
 331, fig. 299. 1950. TYPE: Colombia, Nariño, south end of
 Gorgona Island. 9 Feb. 1939. Killip & García 33095 (HT: US
 1770088; IT: ILL).
- gorgonillense Trel. & Yuncker, Piperaceae no. S. Amer. 1: 406, fig. 368. 1950. TYPE: Colombia, Nariño, Gorgonilla Island. El. 130-200 m. 8 Feb. 1939. Killip & García 33117 (HT: US 1770108; IT: ILL; PT at ILL: Killip & García 33088).
- gracilipedunculum Trel., Contr. U.S. Nat. Herb. 26(4): 148.

 1929. TYPE: Costa Rica, Alajuela, Fraijanes. El. 15001700 m. Feb. 1926. Standley & Torres 47519 (HT: US 1307496;
 PT at ILL: Standley 42095; Standley & Torres 47582; Standley & Valerio 49198).-- [- P. decurrens C.DC. (fide Burger, 1971)]
- gracillimum Trel. in Standley, Field Mus. Publ. Bot. 10: 159.
 1931. Type locality: Honduras, Lancetilla Valley. "In wet forest high on the hills above Lancetilla." No type indicated; probably lectotypification needed (authentic specimen from area of type locality at ILL: Standley 54684).
- gracillimum var. dantoense Trel. in Yuncker, Field Mus. Publ.

 Bot. 9: 279. 1940. TYPE: Honduras, Atlántida, Río Danto, Mt.
 Cangrejal. El. 180 m. 16 July 1938. Yuncker, Koepper &
 Wagner 8485 (HT: ILL).
- grahami Trel., Bull. Torrey Bot. Club 60: 477. 1933. TYPE:
 British Guiana (Guyana), Kyk-over-al, junction of the
 Mazaruni and Cuyuni rivers. 9 July 1924. Graham 227 (HT:
 CM; IT: ILL).-- [= P. dilatatum (fide Trel. & Yuncker, 1950
 and Yuncker, 1957)]

- granuligerum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 169. 1936. TYPE: Peru, Loreto, San Antonio, Alto Río Itaya.
 El. 145 m. Sep.-Oct. 1929. Williams 3459 (HT: F 622875;
 IT: ILL).
- gratum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 170.
 1936. TYPE: Peru, Loreto, Soledad. El. 110 m. 20-22 Sep.
 1929. Killip & Smith 29785 (HT: US; IT: ILL).
- griseocaule Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 170. 1936. TYPE: Peru, Junin, La Merced. El. 1200 m.
 Aug.-Sep. 1923. Macbride 5723 (HT: F 536755; IT: ILL; PT at ILL: Macbride 5595).
- griseo-pubens Trel., Contr. U.S. Nat. Herb. 26(4): 176. 1929.

 TYPE: Costa Rica, Guanacaste, Líbano. El. 300 m. 15 Jan.
 1926. Standley & Valerio 44879 (HT: US 1307328; IT: ILL).-[* P. pseudo-fuligineum (fide Burger, 1971)]
- griseo-reticulatum Trel. in Feddes Repert. Spec. Nov. Regni
 Veg. 24: 362. 1928. TYPE: Haiti, Croix des Bouquets, La
 Selle. El. 1200 m. 14 March 1927. Ekman 7852 (HT: ILL).
- griseovenosum Trel. in Macbr., Field Mus. Publ. Bot. 13(No.
 357): 170. 1936. TYPE: Peru, Loreto, Puerto Arturo.
 E1. 135 m. 24-25 Aug. 1929. Killip & Smith 27803 (HT: US;
 IT: ILL).
- guabinachanum [stet!] Trel. in Feddes Repert. Spec. Nov. Regni
 Veg. 23: 5, 9. 1926. TYPE: Cuba, Pinar del Río, Guabimacho.
 6 March 1924. Ekman 18638 (HT and IT: ILL; PT at ILL: Ekman
 17970).
- guapense Yuncker in Trel. & Yuncker, Piperaceae no. S. Amer. 1:
 28, fig. 19. 1950. TYPE: Colombia, Antioquia, Guapá.
 El. ca 40 m. 23 April 1945. Haught 4594 (HT: US 1709163;
 IT: ILL).
- gurupanum Yuncker, Bol. Inst. Bot. (São Paulo) 3: 100, fig. 87.
 1966. TYPE: Brazil, Pará, Río Amazonas, Gurupá. 3 Nov.
 1929. Killip & Smith 30611 (HT: US 1463625; IT: ILL).-[This species upheld by Yuncker, 1973]
- <u>hanckeli</u> Trel. in Standley, Field Mus. Publ. Bot. 18: 345.
 1937. TYPE: Costa Rica, Guanacaste, upper slopes of Cerro San José de Líbano. El. 500-600 m. 15 Feb. 1930. <u>Dodge</u>, <u>Hanckel & Thomas 6384</u> (HT: CH; IT: ILL).-- [* P. chrysostachyum C.DC. (fide Burger, 1971)]

- <u>hastularum</u> Yuncker in Woodson & Schery, Ann. Mo. Bot. Gard. 37: 21, fig. 5. 1950. TYPE: Colombia, Chocó, Bahía Solano... along Quebrada Jellita. El. 50-100 m. 22 Feb. 1939. <u>Killip & García 33568</u> (HT: US; IT: ILL).-- [This species recognized by Trel. & Yuncker, 1950]
- <u>hastularum</u> var. <u>longipetiolatum</u> Trel. & Yuncker, Piperaceae no. S. Amer. 1: 137. 1950. TYPE: Colombia, El Valle, Río Digua Valley, Piedra de Moler. El. 900-1180 m. Aug. 1943. Cuatrecasas 15106 [HT (or LT): US; IT (or ILT): ILL].
- <u>haughtii</u> Trel. & Yuncker, Piperaceae no. S. Amer. 1: 263, fig. 226. 1950. TYPE: Colombia, Santander, Magdalena Valley. 9 July 1935. <u>Haught 1831</u> (HT: US 1661858; IT: ILL; PT at ILL: Killip, Cuatrecasas & Dryander 39205).
- heraldi Trel. var. amplius Trel. in Woodson & Schery, Ann. Mo. Bot. Gard. 27: 292. 1940. TYPE: Panama, Chiriqui, Finca Lérida to Boquete. El. 1300-1700 m. July 1938. Woodson, Allen & Seibert 1095 (HT: ILL).-- [= P. auritum (fide Yuncker, 1950 and 1957)]
- heraldi var. cocleanum Trel. in Woodson & Schery, Ann. Mo. Bot.

 Gard. 27: 292. 1940. TYPE: Panama, Coclé, El Valle.
 El. 600-1000 m. 8 Dec. 1938. Allen 1192 (HT and IT: ILL).-[= P. auritum (fide Yuncker, 1950 and 1957)]
- hermannii Trel. & Yuncker, Piperaceae no. S. Amer. 1: 397, fig. 358. 1950. TYPE: Colombia, Río Vichada, Vichada. Hermann 10998 (HT: US 1906217; PT at ILL: Colombia, Haught Venezuela, Williams 14681).
- <u>heterocarpum</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 172. 1936. TYPE: Peru, Loreto, Yurimaguas to Balsapuerto. El. 135-150 m. 26-31 Aug. 1929. <u>Killip & Smith</u> 28327 (HT: US; IT: ILL).
- <u>heterotrichum</u> C.DC. var. <u>porrectifolium</u> Trel. & Yuncker, Piperaceae no. S. Amer. 1: 290. 1950. TYPE: Colombia, El Valle, Dagua Valley. 22 Sep. 1922. <u>Killip</u> 11529 (HT: US 1143235; IT: ILL).
- <u>hispaniolae</u> Trel. in Feddes Repert. Spec. Nov. Regni Veg. 23: 305, 309. 1927. TYPE: Santo Domingo. Wright, Parry & Brummel 445 (HT: US; PT at ILL: Leonard 7643).
- hispidiseptum Trel., J. Wash. Acad. Sci. 19: 332. 1929. TYPE:

 Honduras, Atlántida, Lancetilla Valley near Tela. El. 100 m.

 8 Dec. 1927. Standley 52715 (HT: F; IT: ILL; PT at ILL:

 Standley 55660).-- [= P. fraguanum (fide Standley & Steyerm.,
 1952); = P. sancti-felicis (fide Burger, 1971)]

- <u>hispidum</u> Sw. var. <u>lanceolatum</u> Trel. & Yuncker, Piperaceae no. S. Amer. 1: 274, fig. 237. 1950. TYPE: Colombia, Cauca, Río Micay, Caliche. 26 Feb. 1943. <u>Cuatrecasas 14180 [HT: US 1852590; PT at ILL: Ecuador, Mexia 7330 (2 sheets), 8413].</u>
- holguinianum Trel. in Feddes Repert. Spec. Nov. Regni Veg. 23: 4, 7. 1926. TYPE: Cuba, Oriente, Holguin. 29 Oct. 1914. Ekman 3303 (HT: ?; IT: ILL).
- <u>hondonadense</u> Trel. & Yuncker, Piperaceae no. S. Amer. 1: 387, fig. 347. 1950. TYPE: Colombia, Cundinamarca, Salto de Tequendania...La Hondonada. 2 Oct. 1938. <u>Cuatrecasas 244</u> [HT: US 1796828; fragment of type (single leaf) at ILL].
- <u>hondonadense</u> var. <u>javieri</u> Trel. & Yuncker, Piperaceae no. S.
 Amer. 1: 388. 1950. TYPE: Colombia, Cundinamarca, Aguadita.
 28 Nov. 1939. Javier 38 (HT: ILL).
- hostmannianum (Miq.) C.DC. in DC. var. glabrirameum Trel. &
 Yuncker, Piperaceae no. S. Amer. 1: 307. 1950. TYPE:
 Venezuela, Amazonas, Tamatama, upper Orinoco. El. 121 m.
 4 May 1942. Williams 15129 (HT: US 1877446; IT: ILL; PT at ILL: Killip 37311).
- hostmannianum [var.] β ramiflorum (Miq.) C.DC. in DC., Prodromus
 16(1): 287. 1869 [based on Artanthe ramiflorum Miq. ex C.DC.
 in DC., pro syn.]. TYPE: Suriname, Suriname R., near
 Victoria. Dec. 1843. Kappler 1397 (HT: ?; IT: ILL).-- [This variety recognized by Yuncker, 1957]
- <u>huacachianum</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 172. 1936. TYPE: Peru, Huánuco, Huacachi near Muña. El. 1950 m. May-June 1923. <u>Macbride 4156</u> (erroneously cited as "4167") (HT: F 535230; IT: ILL).-- Type number verified by Burger (pers. comm.)]
- <u>huacapistanum</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 173. 1936. TYPE: Peru, Junin, Huacapistana. 6 Dec. 1924. Stevens 77 (HT: ILL; PT at ILL: Stevens 79).
- <u>huallaganum</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 173. 1936. TYPE: Peru, Huánuco, Huallaga Canyon below Río Santo Domingo. El. 1200 m. 3 June 1923. <u>Macbride</u> 4235 (HT: F 535314; IT: ILL).
- <u>huantanum</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 173. 1936. TYPE: Peru, Ayacucho, Estrella, between Huanta and R1o Apurimac. El. 500 m. <u>Killip & Smith</u> 23074 (HT: US; IT: ILL; PT at ILL: Killip & <u>Smith</u> 25193).

- <u>humoense</u> Trel. in Standley, Field Mus. Publ. Bot. 18: 346, 1937.
 TYPE: Costa Rica, Cartago, Pejivalle Farm above Río Humo.
 El. 800 m. 25 Sep. 1929. <u>Dodge & Thomas 4371</u> (HT: GH; IT: ILL).-- [= P. <u>hispidum</u> (fide Burger, 1971)]
- humorigaudens Trel. in Woodson & Schery, Ann. Mo. Bot. Gard. 27:
 293. 1940. TYPE: Panama, Coclé, N rim of El Valle de Antón.
 21 May 1939. Allen 1833 (HT: ILL).-- [This species recognized by Yuncker, 1950]
- * <u>ibaguense</u> Trel., Trab. Mus. Nac. Ci. Nat. Ser. Bot. 33: 50. 1936 (without a Latin diagnosis). TYPE: Colombia, Tolima, Ibagué. El. 1000-1500 m. 13 Aug. 1922. <u>Killip 9724</u> (HT, or LECTOTYPE designated herein: ILL; PT at ILL: <u>Cuatrecasas 2419</u>).-- [= P. <u>aequale</u> (fide Trel. & Yuncker, 1950; Yuncker, 1950 and 1957)]
 - ignacioanum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 280,
 fig. 244. 1950. TYPE: Ecuador, Guayas, Tenguel, San Ignacio.
 17 Nov. 1919. Holmgren 5 (HT: US 1481980; IT: ILL).
- * illudens Trel., Trab. Mus. Nac. Ci. Nat. Ser. Bot. 33: 50. 1936
 (without a Latin diagnosis). TYPE: Colombia, Ibagué.
 El. 1350 m. 10 May 1932. Cuatrecasas 2424 (HT, or LECTOTYPE designated herein: ILL).-- [-P. aduncum (fide Trel. & Yuncker, 1950; Yuncker, 1950, 1955)]
 - immite Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 174.
 1936. TYPE: Peru, Junín, La Merced. El. 700 m. May-June
 1929. Killip & Smith 23524 (HT: US; IT: ILL; PT at ILL:
 Killip & Smith 23437, 23468, 24074).
 - immutatum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 175. 1936. TYPE: Peru, Loreto, Balsapuerto. El. 350-550 m.
 29 Aug. 1929. Killip & Smith 28536 (HT: US; IT: ILL).
 - imperspicuibracteum Trel., J. Wash. Acad. Sci. 19: 332. 1929.
 TYPE: Honduras, Atlântida, near Tela. 19 Jan. 1928.
 Standley 54770 (HT: F; IT: ILL; PT at ILL: Standley 56602).-[= P. fraguanum (fide Standley & Steyerm., 1952); = P.
 sancti-felicis (fide Burger, 1971)]
 - inauspicatum Trel., Ciencia (Mexico) 2: 207. 1941. TYPE: Peru, Chanchamayo. Isern 2184 (HT: MA?; IT: ILL).
 - Incanum Trel. in Standley, J. Wash. Acad. Sci. 13: 436. 1923.
 TYPE: El Salvador, vicinity of San Salvador. El. 650-850 m.
 20 Dec. 1921-4 Jan. 1922. Standley 19129 (HT: ILL).
 - incitum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 175.
 1936. TYPE: Peru, Junín, Huacapistana. El. 1800 m. 6 June
 1929. Killip & Smith 24304 (HT: US; IT: ILL).

- inclemens Trel. & Yuncker, Piperaceae no. S. Amer. 1: 321, fig. 286. 1950. TYPE: Ecuador, Esmeraldas, Parroquia Concepción, Playa Rica. El. 105 m. 7 Dec. 1936. Mexia 8418 (HT: US 1778442; IT: ILL).
- Inconsumptum Trel. in Yuncker, Field Mus. Publ. Bot. 17: 346.
 1938. TYPE: Honduras, Cortés, forest near Parál, Lake Yojoa.
 El. 630 m. 30 July 1934. Yuncker 4871 (HT: ILL; PT at ILL: Yuncker 4874).
- incurvum Sieber ex Schultes, L. Mant. Syst. Veg. 1: 238. 1822.

 TYPE: Martinique. Sieber 254 [HT: B?; IT: (marked "Cotype"): ILL].-- [This is the type species of Sarcorhachis Trel., Contr. U.S. Nat. Herb. 26: 16. 1927, emend. Steyerm., Pittieria 3: 29. 1971 = S. incurva (Sieber ex Schultes)

 Trel. (see Howard, 1973)]
- indianonum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 176. 1936. TYPE: Peru, Loreto, Iquitos, Fundo Indiano.
 El. 110 m. 21 Jan. 1932. Mexia 6396 (HT: UC; IT: ILL; PT at ILL: Mexia 6441).
- indiciflexum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 176. 1936. TYPE: Peru, Junín, Huacapistana. El. 18002400 m. 5-8 June 1929. Killip & Smith 24507 (HT: US; IT: ILL).
- indignum Trel., J. Wash. Acad. Sci. 19: 333. 1929. TYPE:
 Honduras, Comayagua, near Siguatepeque. El. 1100 m.
 Feb. 1928. Standley 55990 (HT: F; IT: ILL).-- [This species recognized by Standley & Steyerm., 1952]
- infidele Trel. & Yuncker, Piperaceae no. S. Amer. 1: 159, fig. 138. 1950. TYPE: Colombia, Putumayo, near the Colombia-Ecuador boundary at the confluence of the San Miguel and Conejo rivers. El. 300 m. 9 Dec. 1940. Cuatrecasas 10921 (HT: US 1799102; IT: ILL).
- * insignilaminum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 17,
 fig. 5. 1950. TYPE: Colombia, Antioquia, Yarumal.
 Oct. 1941. Tomás Alberto 1628 [LECTOTYPE designated herein
 (Fig. 5): ILL; ILT: ILL].
 - insolens Trel., Contr. U.S. Nat. Herb. 26(4): 156. 1929. TYPE:

 Costa Rica, San José, Santa María de Dota. El. 1500-1800 m.

 Standley & Valerio 43306 (HT: US 1307288; IT: ILL).-- [= P. biauritum C.DC. (cf. Burger, 1971)]

- instabilipes Trel. in Standley, Field Mus. Publ. Bot. 17: 232.
 1937. TYPE: Guatemala, Petén, Santa Teresa, Subín River.
 14 April 1933. <u>Lundell</u> 2776 (HT: ILL).-- [This species recognized by Standley & Steyerm., 1952]
- insulicolum Trel. in Woodson & Schery, Ann. Mo. Bot. Gard. 27:
 293. 1940. TYPE: Panama, Prov. Panamá, Isla Taboga. 24 June
 1938. Woodson, Allen & Seibert 1527 (HT: ILL).-- [= P.
 taboganum (fide Yuncker, 1950); = P. pseudo-fuligineum (cf.
 Burger, 1971)]
- interitum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 176. 1936. TYPE: Peru, Junin, Pichis Trail, Santa Rosa.
 El. 625-900 m. 6, 7 July 1929. Killip & Smith 26150 (HT: US; IT: ILL).
- intersitum Trel. in Daniel, Una ascensión Cerro "La Vieja", 12.
 1940 (without a Latin diagnosis); Caldasia 1: 86. 1940.
 TYPE: Colombia, Antioquia, Porcecito. Daniel 890 (HT: US; fragments of type at ILL).-- [= P. aduncum (fide Trel. & Yuncker, 1950; Yuncker, 1950, 1955 and 1957)]
- intonsum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 177. 1936. TYPE: Peru, Junin, La Merced. El. 600 m.
 Macbride 5445 (HT: F 536479; PT at ILL: Williams 6829).
- iquitosense Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 177. 1936. TYPE: Peru, Loreto, Iquitos. July 1929.
 Williams 1432 (HT: F 617448; IT: ILL; PT at ILL: Killip &
 Smith 26275, 26899, 28181; Williams 1332).
- Irazuanum C.DC. var. suborbiculatum Trel., Contr. U.S. Nat.
 Herb. 26(4): 137. 1929. TYPE: Costa Rica, San José, near
 Finca La Cima, above Los Lotes, N of El Copey. El. 21002400 m. Dec. 1925. Standley 42681 (HT: US 1307274; IT:
 ILL; PT at ILL: Standley 41951).-- [= P. lacunosum Kunth
 (fide Burger, 1971)]
- <u>irrasum</u> Trel., Contr. U.S. Nat. Herb. 26(4): 151. 1929. TYPE:

 Costa Rica, Cartago, El Muñeco, Río Navarro. El. 14001500 m. 6, 7 March 1926. <u>Standley & Valerio 50961</u> (HT: US 1307609; IT: ILL).-- [= P. <u>imperiale</u> (fide Burger, 1971)]
- * isernii Trel., Ciencia (Mexico) 2: 207. 1941. TYPE: Ecuador, La Coca. July 1865. Isern 1392 (HT, or LECTOTYPE designated herein: ILL; IT or ILT: MA).-- [- P. archidonense (fide Trel. & Yuncker, 1950)]

- itayanum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 177. 1936. TYPE: Peru, Loreto, Paraíso, Alto Río Itaya.
 El. 145 m. Williams 3320 (HT: F 623464; PT at ILL: Killip & Smith 27245, 28130, 29617; Williams 3509).
- itayanum var. antoniense Trel. in Macbr., Field Mus. Publ. Bot.
 13(No. 357): 178. 1936. TYPE: Peru, Loreto, San Antonio.
 El. 110 m. 18 Sep. 1929. Killip & Smith 29450 (HT: US; IT: ILL; PT at ILL: Killip & Smith 27324).
- <u>itayanum var. pichisense</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 178. 1936. TYPE: Peru, Junin, Cahuapanas, Río Pichis. El. 340 m. 20, 21 July 1929. <u>Killip & Smith 26738</u> (HT: US; IT: ILL; PT at ILL: Killip & Smith 26260, 26750).
- <u>itayanum</u> var. <u>san-juanum</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 178. 1936. TYPE: Peru, Loreto, Iquitos, San Juan. El. 120 m. Oct. 1929. <u>Williams</u> <u>3720</u> (HT: F 618346; IT: ILL).
- jaboncillanum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 233, fig. 200. 1950. TYPE: Colombia, Santander, Río Suratá Valley, between Bucaramanga and El Jaboncillo. El. 800-1500 m. 2 Jan. 1927. Killip & Smith 16388 (HT: US 1352133; IT: ILL).
- jaculifolium Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 178. 1936. TYPE: Peru, Junin, La Merced. El. 700 m.
 May-June 1929. Killip & Smith 24060 (HT: US; IT: ILL).
- jaliscanum S. Watson, Proc. Amer. Acad. Arts 26: 145. 1891.

 TYPE: Mexico, cañons near Guadalajara. June 1886. Palmer
 122, in flower. Dec. 1888. Pringle 2153, in young fruitsyntypes, probably to be lectotypified (fragment of Palmer
 122 at ILL).-- [This species recognized by Standley, 1920]
- jamaoanum Trel. in Feddes Repert. Spec. Nov. Regni Veg. 29: 29.
 1931. TYPE: Santo Domingo, Colonia Jamao, Moca. El. 900 m.
 21 May 1925. Ekman 12576 (HT: ILL).
- jericoense Trel. & Yuncker, Piperaceae no. S. Amer. 1: 397, fig.
 359. 1950. TYPE: Colombia, Antioquia, Jericó. Dec. 1940.
 Alejandro 2730 [HT: US 1830390; IT: ILL (2 sheets)].
- Jubimarginatum Yuncker, Bol. Inst. Bot. (São Paulo) 3: 8, fig. 6. 1966. TYPE: Brazil, Rio de Janeiro, Mauá. 28 Jan. 1897. Ule 4366 (HT: R; IT: ILL).-- [This species upheld by Yuncker, 1972]

- kantetulense Trel. ex Standley in Standley & Record, Field Mus.
 Publ. Bot. 12: 408. 1936. TYPE: Guatemala, Petén, Kantetul.
 2 May 1933. Lundell 3173 (HT: MICH; IT: ILL).-- [= P.
 aeruginosibaccum (fide Standley & Steyerm., 1952); = P.
 jacquemontianum (cf. Burger, 1971)]
- <u>kantetulense</u> var. <u>gentlei</u> Trel. ex Standley in Standley & Record, Field Mus. Publ. Bot. 12: 408. 1936. TYPE: British Honduras (Belize), Northern River, Prospecto. Nov. 1933.
 <u>Gentle 947</u> (HT: MICH; IT: ILL).-- [= P. <u>aeruginosibaccum</u> (fide Standley & Steyerm., 1952; = P. <u>jacquemontianum</u> (cf. Burger, 1971)]
- <u>kerberi</u> C.DC., Annuaires Conserv. Jard. Bot. Genève 2: 258.
 1898. TYPE: Mexico, Veracruz, Cordoba. <u>Kerber</u> 26 [HT: LE?; fragment of type (single leaf) at ILL].
- kimpitirikianum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 179. 1936. TYPE: Peru, Ayacucho, Río Apurimac Valley, near Kimpitiriki. El. 400 m. 10 May 1929. Killip & Smith 22847 (HT: US; IT: ILL).
- <u>koepperi</u> Trel. in Yuncker, Field Mus. Publ. Bot. 9: 279. 1940.
 TYPE: Honduras, Yoro, Aguán Valley near Medina. El. 195 m.
 Yuncker, Koepper & Wagner 8631 (HT: ILL).
- <u>konkintoense</u> Trel. in Woodson & Schery, Ann. Mo. Bot. Gard. 27: 293. 1940. TYPE: Panama, Bocas del Toro, between Finca St. Louis and Konkintoë. El. 10-50 m. Aug. 1938. Woodson, Allen & Seibert 1894 (HT: ILL).-- [= P. hispidum (fide Yuncker, 1950, 1955 and 1957); = P. sancti-felicis (fide Burger, 1971)]
- <u>krukoffii</u> Yuncker, Bol. Inst. Bot. (São Paulo) 3: 24, fig 18.
 1966. TYPE: Brazil, Amazonas, Mun. Humayta, near Livramento, on Río Livramento. Oct.-Nov. 1934. <u>Krukoff</u> 6892 (HT: NY; IT: ILL).-- [This species upheld by Yuncker, 1972]
- laceratibracteum Trel. in Yuncker, Field Mus. Publ. Bot. 17:

 346. 1938. TYPE: Honduras, Comayagua, El Achote, above
 Siguatepeque. El. 1350 m. 30 July 1936. Yuncker, Dawson &
 Youse 6226 (HT: ILL).
- lacunosum Kunth var. angustifolium Trel. & Yuncker, Piperaceae no. S. Amer. 1: 21. 1950. TYPE: Colombia, Caldas, San Felíx near Salamina. El. 3000 m. July 1944. Tomás Alberto 2459 (HT: US 1564178; PT at ILL: García Barriga 11882; Pennell 9193).

- lacunosum var. glabricaule Trel. & Yuncker, Piperaceae no. S.

 Amer. 1: 21. 1950. TYPE: Colombia, Huila, Balsillas.

 El. 2000-2100 m. 3-6 Aug. 1917. Rusby & Pennell 709 (HT: US 1041445; PT at ILL: Cuatrecasas 19215).
- la-doradense Trel. & Yuncker, Piperaceae no. S. Amer. 1: 244, fig. 212. 1950. TYPE: Colombia, Caldas, Quebrada Pontaná, ca 18 km W of La Dorado. El. 400 m. 30 Dec. 1936. Haught 2140 (HT: US 1742379; IT: ILL).
- <u>laedans</u> Trel. in Yuncker, Field Mus. Publ. Bot. 17: 347. 1938.
 <u>TYPE</u>: Honduras, Comayagua, El Achote, above Siguatepeque.
 El. 1350 m. 13 July 1936. <u>Yuncker</u>, <u>Dawson & Youse 5821</u> (HT: ILL).
- laeteviride Ekman ex Trel. in Feddes Repert. Spec. Nov. Regni Veg. 29: 29. 1931. TYPE: Santo Domingo, San Cristóbal, Cambita, Arroyo Blanco. 27 Jan. 1929. Ekman 11339 (HT: ILL).
- lagenaebaccum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 179. 1936. TYPE: Peru, Junín, Puerto Yessup. El. 400 m. 10-12 July 1929. Killip & Smith 26249 (HT: US; IT: ILL; PT at ILL: Killip & Smith 26175).
- laguna-cochanum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 132, fig. 108. 1950. TYPE: Colombia, Putumayo, south side of Laguna de la Cocha, Quebrada de Santa Lucía. El. 2850 m. 8 Jan. 1941. Cuatrecasas 11844 (HT: US 1798192; PT at ILL: Ewan 16344, 16601).
- lamasense Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 180. 1936. TYPE: Peru, San Martín, Lamas near Tarapoto. El.
 840 m. Dec. 1929. Williams 6401 (HT: F 623619; IT: ILL).
- lancetillanum Trel., J. Wash. Acad. Sci. 19: 333. 1929. TYPE:

 Honduras, Atlántida, Lancetilla Valley near Tela. El. 100 m.
 5 March 1928. Standley 56552 (HT: F 581987; IT: ILL; PT at ILL: Standley 53231).
- lanosibracteum Trel., Contr. U.S. Nat. Herb. 26(4): 182. 1929.

 TYPE: Costa Rica, Cartago, Río Reventado, N of Cartago.

 El. 1500 m. 26 Feb. 1926. Standley & Valerio 49457 (HT: US 1307575; IT: ILL; PT at ILL: Standley & Valerio 49435, 49482).-- [= P. hispidum (fide Burger, 1971)]
- lanosicaule Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 181. 1936. TYPE: Peru, Junín, San Ramón, Schunke Hacienda.
 El. 1400-1700 m. 8-12 June 1929. Killip & Smith 24723 (HT: US; IT: ILL; PT at ILL: Killip & Smith 25646).-- [See note under P. enenyasense]

- late-ovatum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 181. 1936. TYPE: Peru, San Martín, San Roque. El. 13501500 m. Jan.-Feb. 1930. Williams 7083 (HT: F 623091; IT: ILL).
- laterifissum Trel., J. Wash. Acad. Sci. 19: 333. 1929. TYPE:
 Honduras, Atlántida, Lancetilla Valley near Tela. El. 300 m.
 31 Dec. 1927. Standley 53943 (HT: F 584143; IT: ILL).
- ledezmae Trel. & Yuncker, Piperaceae no. S. Amer. 1: 82, fig.
 67. 1950. TYPE: Colombia, Chocó, Corcovada region, upper Río
 San Juan. El. 200-275 m. 24, 25 April 1939. Killip &
 Ledezma 35314 (HT: US 1772051; IT: ILL; PT at ILL: Archer
 2007).-- [= affin. P. ottoniaefolium C.DC. (cf. Trel. &
 Yuncker, 1950)]
- Piperaceae no. S. Amer. 1: 89. 1950. TYPE: Colombia, El Valle, Valley of Río Cali, between Puente Sofía and Yanaconas. El. 1580-1730 m. 6 Nov. 1944. Cuatrecasas 18704 (HT: US 1854284; IT: ILL).
- leucofustum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 182. 1936. TYPE: Peru, Junin, La Merced. El. 700 m.
 May-June 1929. Killip & Smith 23736 (HT: US; IT: ILL).
- leucophaeocaule Trel. in Macbr., Field Mus. Publ. Bot. 13(No.
 357): 183. 1936. TYPE: Peru, Loreto, Lower Rio Nanay.
 May-June 1929. Williams 301 (HT: F 603748; IT: ILL; PT at
 ILL: Killip & Smith 24629, 27037, 27469).
- leucophaeum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 183. 1936. TYPE: Peru, San Martín, Tarapoto. El. 750 m.
 Dec. 1929. Williams 6086 (HT: F 618084; IT: ILL).
- leucophlebium Trel., Contr. U.S. Nat. Herb. 26(4): 176. 1929.

 TYPE: Costa Rica, Guanacaste, Tilarán. El. 600 m.

 Jan. 1926. Standley & Valerio 44277 [HT: US 1307301; IT:

 ILL; probable PT at ILL: Standley & Valerio 45708 (cited as 45908)].-- [= P. villiramulum C.DC. (fide Burger, 1971)]
- leucostachyum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 184,
 fig. 143. 1950. TYPE: Colombia, Santander, Río Suratá valley
 above Suratá. El. 2000-2300 m. 5, 6 Jan. 1927. Killip &
 Smith 16575 (HT: US 1352301; IT: ILL; PT at ILL: Killip &
 Smith 16694).

- <u>levilimbum</u> Trel., J. Wash. Acad. Sci. 19: 333. 1929. TYPE: Honduras, Atlántida, Lancetilla Valley near Tela. El. 100 m. 22 Dec. 1927. <u>Standley 53483</u> (HT: F 583185; IT: ILL; PT at ILL: <u>Standley 53839</u>, <u>55263</u>).
- ligatispicum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 183. 1936. TYPE: Peru, Loreto, Yurimaguas. El. 135 m.
 Aug.-Sep. 1929. Killip & Smith 28183 (HT: US; IT: ILL).
- lincolnense Trel. in Standley, Field Mus. Publ. Bot. 18: 347.

 1937. TYPE: Panama, Bocas del Toro, Changuinola Valley,
 Lincoln Creek. 3 March 1924. Dunlap 484 (HT: F; IT: ILL).-[- P. glabrescens (fide Burger, 1971)]
- lineativillosum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 321, fig. 287. 1950. TYPE: Colombia, El Valle, north shore of Buenaventura Bay, near sea level. 3 June 1944. Killip & Cuatrecasas 38734 (HT: US 1856798; IT: ILL).
- lineatum Ruiz & Pavón var. hirtipetiolatum Trel. in Macbr.,
 Field Mus. Publ. Bot. 13(No. 357): 184. 1936. TYPE: Peru,
 Huánuco, Huacachi near Muña. El. 1950 m. May-June 1923.
 Macbride 4182 (HT: F 535259; IT: ILL).
- lineatum var. leucolepidum Trel. in Macbr., Field Mus. Publ.

 Bot. 13(No. 357): 184. 1936. TYPE: Peru, Junín, Carrapa.

 El. 1000 m. May 1929. Killip & Smith 22495 (HT: US; IT: LL; PT at ILL: Killip & Smith 22451, 22565).
- linguifolium Ham. var. brevifolium Trel. in Feddes Repert. Spec.

 Nov. Regni Veg. 24: 362. 1928. TYPE: Haiti, Anses à Pitres,
 La Selle. 7 Sep. 1926. Ekman 6912 (HT: ILL).
- liratinerve Trel. in Woodson & Seibert, Ann. Mo. Bot. Gard. 24:

 186. 1937. TYPE: Panama, Chiriquí, valley of the upper Río Chiriquí Viejo, vicinity of Monte Lirio. El. 1300-1900 m.

 June 1935. Seibert 158 (HT: MO; IT: ILL).-- [= P.

 pseudo-lanceaefolium Trel. (fide Yuncker, 1950); = P.

 lanceaefolium Kunth (fide Burger, 1971)]
- <u>11atanum</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 185. 1936. TYPE: Peru, Huánuco, Llata, Río Marañón Canyon.
 El. 2100 m. 21 Aug. 1922. <u>Macbride & Featherstone 2302</u> (HT: F 518785; IT: ILL).
- loefgrenii Yuncker, Bol. Inst. Bot. (São Paulo) 3: 10, fig. 8.

 1966. TYPE: Brazil, São Paulo, Araraquara. 28 Sep. 1888.
 Loefgren 447 (HT: ILL).-- [This species upheld by Yuncker, 1972]

- longegerminatum Trel. in Macbr., Field Mus. Publ. Bot. 13(No.
 357): 185. 1936. TYPE: Peru, Loreto, Santa Rosa. El. 135 m.
 1-5 Sep. 1929. Killip & Smith 28839 (HT: US; IT: ILL; PT
 at ILL: Killip & Smith 28439).
- longichaetum Yuncker, Lilloa 27: 127, pl. 15. [1953] 1955.
 TYPE: Bolivia, La Paz, Challana region. El. 800 m.
 Nov. 1933. Cárdenas 1325 (HT: ILL).
- longispicum C.DC. var. villipetiolatum Yuncker in Trel. &
 Yuncker, Piperaceae no. S. Amer. 1: 140. 1950. TYPE:
 Colombia, Nariño, Cerro de Puerto above Puerto. El. 2320 m.
 July 1944. Ewan 15947 (HT: USNA; IT: ILL).
- longivillosum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 35, fig. 27. 1950. TYPE: Colombia, Chocó, Río Catripe. El. 100 m. 17 Jan. 1947. Haught 5445 (HT: US 1709497; PT at ILL: Killip & García 33491).
- loretoanum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):

 186. 1936. TYPE: Peru, Loreto, Yurimaguas. El. 135 m.

 Aug.-Sep. 1929. Killip & Smith 27555 (HT: US; IT: ILL; PT at ILL: Williams 4758).
- losoense Trel. & Yuncker, Piperaceae no. S. Amer. 1: 345, fig.
 317. 1950. TYPE: Colombia, Norte de Santander, Loso.
 El. 2200-2400 m. 6, 7 March 1927. Killip & Smith 20436 (HT:
 US 1355482; IT: ILL; PT at ILL: Killip & Smith 16780, 18844,
 18907, 18922).
- lucaeanum Kunth var. grandifolium Yuncker, Bol. Inst. Bot. (São
 Paulo) 3: 104, fig. 90. 1966. TYPE: Brazil, Paraná, Pôrto de
 Cima. 2 Jan. 1914. Dusen 14304 (HT: S; PT at ILL: Dusen
 6905, 7025).-- [This variety upheld by Yuncker, 1973]
- lundellianum Trel. in Standley, Field Mus. Publ. Bot. 17: 232.
 1937. TYPE: Guatemala, Petén, La Libertad. 31 May 1933.
 Lundell 3524 (HT: ILL-- the specimen labelled "P.
 lundelliifolium, Type").-- [= P. amalago (fide Standley & Steyerm., 1952)]
- luteobaccum Trel. in Feddes Repert. Spec. Nov. Regni Veg. 29:
 29. 1931. TYPE: Santo Domingo, Loma La Campana. El. 800 m.
 11 Feb. 1929. Ekman 11527 (HT: ILL).
- macbrideanum Trel. in Macbr., Field Mus. Publ. Bot. 13(2): 187.
 1936. TYPE: Peru, Junín, La Merced. El. 600 m. 10-24 Aug.
 1923. Macbride 5516 (HT: F 536556; IT: ILL).

- <u>macedoi</u> Yuncker forma <u>longispicum</u> Yuncker, Bol. Inst. Bot. (São Paulo) 3: 52. 1966. TYPE: Brazil, Minas Gerais, Diamantina, Barão. El. 1180 m. 19 May 1931. <u>Mexia 5859</u> (HT: US 1618265; IT: ILL).-- [This variety upheld by Yuncker, 1972]
- macerispicum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 404, fig. 366. 1950. TYPE: Colombia, Caquetá, Florencia. El. 400 m. 29 March 1940. Cuatrecasas 8807 (HT: US 1795402; PT at ILL: Klug 1706).
- <u>machupicchuense</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 187. 1936. TYPE: Peru, Cuzco, San Miguel, Valle de Machupicchu. El. 2300 m. 20 July 1928. <u>Herrera 2006</u> (HT: F 580236; IT: ILL).
- <u>maestranum</u> Trel. in Feddes Repert. Spec. Nov. Regni Veg. 23:
 6, 10. 1926. TYPE: Cuba, Oriente, Sierra Maestra. 17 July
 1922. <u>Ekman</u> 14347 (HT: ILL; PT at ILL: <u>Ekman</u> 1449, 3050,
 7245, 14891).
- <u>maguirei</u> Yuncker in Maguire & Collaborators, Bull. Torrey Bot.
 Club 75: 289. 1948. TYPE: Suriname, Tafelberg. 19 Sep.
 1944. <u>Maguire 24811</u> (HT: NY; IT: ILL).-- [This species recognized by Trel. & Yuncker, 1950 and Yuncker, 1957]
- <u>malifolium</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 188. 1936. TYPE: Peru, Huánuco, Pozuzo. El. 600 m. 20-22 June 1923. <u>Macbride</u> 4620 (HT: F 535697; IT: ILL).
- malifolium var. mercedanum Trel. in Macbr., Field Mus. Publ.
 Bot. 13(No. 357): 188. 1936. TYPE: Peru, Junín, La Merced.
 El. 600 m. 10-24 Aug. 1923. Macbride 5288 (HT: F 536313;
 IT: ILL).
- manausense Yuncker, Bol. Inst. Bot. (São Paulo) 3: 107, fig. 93.
 1966. TYPE: Brazil, Amazonas, Manáus. El. 25 m. 17 Oct.
 1929. Killip & Smith 30136 (HT: US 1463310; IT: ILL).-[This species upheld by Yuncker, 1973]
- <u>mandinganum</u> Trel. & Yuncker, Piperaceae no. S. Amer. 1: 153, fig. 131. 1950. TYPE: Colombia, Chocó, S of Río Condoto between Quebrada Guarapo and Mandinga. El. 120-180 m. 22, 28 April 1939. <u>Killip</u> 35160 (HT: US 1771915; IT: ILL).
- marcescentispicum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 189. 1936. TYPE: Peru, Junín, Pichis Trail, Santa Rosa. El. 625-900 m. 6, 7 July 1929. Killip & Smith 26182 (HT: US; IT: ILL).

- margaretae Trel. in Woodson & Schery, Ann. Mo. Bot. Gard. 27: 293. 1940. TYPE: Panama, Chiriquí, island in upper Río Chiriquí Viejo. 13 July 1938. White 158 (HT: ILL).-- [= P. hispidum (fide Yuncker, 1950 and 1957)]
- margaritatum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 189. 1936. TYPE: Peru, San Martin, San Roque. El. 1350 1500 m. Jan.-Feb. 1930. Williams 7742 (HT: F 623556; IT:
 ILL).
- marginatum Jacq. var. clausum Yuncker, Ann. Mo. Bot. Gard. 37: 17. 1950. TYPE: Panama, Canal Zone, Empire. 5 March 1937. Miller 1861 (HT: US; IT: ILL; PT at ILL: Woodson, Allen & Seibert 1608).-- [This variety upheld by Yuncker, 1953 and 1957]
- marginatum var. domatiiferum Trel. in Feddes Repert. Spec. Nov. Regni Veg. 23: 306. 1927. TYPE: Haiti, Nord, Mt. Platanna, St. Michel de l'Atalaye. 7 Dec. 1925. Leonard 7798 (HT: ILL; PT at ILL: Leonard 7810).
- marmoreum Trel. in Woodson & Seibert, Ann. Mo. Bot. Gard. 24:

 186. 1937. TYPE: Panama, Prov. Panama, vicinity of Arenoso, lower Río Trinidad. El. 26-50 m. Aug. 1935. Seibert 622 (HT: ILL).-- [= P. grande Vahl (fide Yuncker, 1950)]
- marsupiiferum Trel. in Macbr., Field Mus. Publ. Bot. 13(No.
 357): 189. 1936. TYPE: Peru, Loreto, Soledad, Río Itaya.
 El. 110 m. 20-22 Sep. 1929. Killip & Smith 29606 (HT: US;
 IT: ILL).
- martensianum C.DC. in DC. var. interior Trel., J. Wash. Acad. Sci. 16: 205. 1926. TYPE: Mexico, Chiapas, Monserrate. 1925. Purpus 172 [HT: US 1209374; IT: ILL (actually a fragment of the type); PT at ILL: Purpus 143].
- <u>martinense</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 190. 1936. TYPE: Peru, San Martín, Lamas, near Tarapoto.
 El. 840 m. Dec. 1929. <u>Williams</u> 6407 (HT: F 623618; IT: ILL).
- <u>masiseanum</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 190. 1936. TYPE: Peru, Loreto, Masisea. El. 275 m. 25 July 1929. <u>Killip & Smith</u> 26846 (HT: US; IT: ILL).
- maternale Trel. in Standley, Field Mus. Publ. Bot. 18: 349.

 1937. TYPE: Panama, Bocas del Toro, Flat Rock, Almirante.

 1928. Cooper 210 (HT: F; IT: ILL).-- [= P. subcaudatum Trel. var. maternale (Trel.) Yuncker, 1950; = P. littorale C.DC. (fide Burger, 1971)]

- medium Jacq. var. leonardi Trel. in Feddes Repert. Spec. Nov.
 Regni Veg. 23: 305. 1927. TYPE: Haiti, Nord, Marmelade.
 20 Dec. 1925. Leonard 8321 (HT: ILL).-- [= P. amalago (cf. Yuncker, 1962)]
- melanopremnum Trel. & Ekman in Feddes Repert. Spec. Nov. Regni Veg. 26: 342. 1929. TYPE: Haiti, La Hotte, Quillaud, Les Roseaux. El. 1500 m. 27 June 1928. Ekman 10139 (HT: ILL; PT at ILL: Ekman 10298, 10421).
- melendezense Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 191. 1936. TYPE: Peru, Loreto, Puerto Meléndez, below Pongo
 de Manseriche. El. 200 m. 5 Jan. 1932. Mexia 6382 (HT: UC;
 IT: ILL).
- mellibracteum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 191. 1936. TYPE: Peru, Huánuco, Río Huallaga Canyon, below Río Santo Domingo. El. 1200 m. 3 June 1923. Macbride 4234 (HT: F 535313; IT: ILL).-- [= P. elongatum (fide annotation in Trelease's handwriting)]
- melula Trel., J. Arnold Arb. 9: 148. 1928. TYPE: New Guinea, Papua, Vaitata River, Hewa. 13 March 1926. Brass 1130 (LECTOTYPE designated herein: A; ILT: ILL).
 - meraense Trel. & Yuncker, Piperaceae no. S. Amer. 1: 242, fig. 210. 1950. TYPE: Ecuador, Napo-Pastaza, Cantón Mera. El. 900 m. 4 May 1935. Mexia 7019 (HT: US 1692972; IT: ILL; PT at ILL: Ecuador, Mexia 6848; Colombia, Killip & García 33490).
 - mercedense Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 191. 1936. TYPE: Peru, Junín, La Merced. El. 700 m. May-June 1929. Killip & Smith 23731 (HT: US; IT: ILL).
 - mercens Yuncker, Lilloa 27: 135, pl. 19(1). [1953] 1955.
 TYPE: Bolivia, La Paz, S. Yungas, Colaya. El. 1850 m.
 13 Dec. 1935. Mexia 7814 (HT: CH; IT: ILL).
 - <u>meritum Trel.</u> in Yuncker, Field Mus. Publ. Bot. 9: 279. 1940.
 <u>TYPE</u>: Honduras, Atlántida, La Ceiba. 12 July 1938. <u>Yuncker</u>,
 <u>Koepper & Wagner 8363</u> (HT: ILL).
 - metanum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 342, fig. 314. 1950. TYPE: Colombia, El Meta, ca 20 km SE of Villavicencio. El. ca 500 m. 17 March 1939. Killip 34246 (HT: US 1771064; IT: ILL; PT at ILL: Haught 2462, 2769).

- mikaniaefolium Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 192. 1936. TYPE: Peru, Loreto, Yurimaguas to Balsapuerto. El. 135-150 m. 26-31 Aug. 1929. Killip & Smith 30691 (HT: US; IT: ILL).
- milciadesii Trel. & Yuncker, Piperaceae no. S. Amer. 1: 314,
 fig. 280. 1950. TYPE: Colombia, El Valle, Río Digua Valley
 between La Elsa and Río Blanco. El. 825 m. April 1939.
 Killip & Milciades Dussán 34732 (HT: US 1771530; IT: ILL;
 PT at ILL: Haught 4630).
- millepunctulatum Trel. & Yuncker, Piperaceae no. S. Amer. 1:

 332, fig. 300. 1950. TYPE: Colombia, Chocó, Andagoya.

 El. 70-100 m. April 1939. Killip 35062 (HT: US 1771816; IT: ILL).
- minute-scabiosum Trel. in Woodson & Schery, Ann. Mo. Bot. Gard.

 27: 294. 1940. TYPE: Panama, Coclé, north rim of El Valle de
 Antón. 12 Feb. 1939. Allen 1639 (HT: ILL).-- [This species recognized by Yuncker, 1950]
- minute-scabiosum var. arborescens Trel. in Woodson & Schery,
 Ann. Mo. Bot. Gard. 27: 294. 1940. TYPE: Panama, Coclé, El
 Valle. 8 Dec. 1938. Allen 1185 (HT: ILL).-- [= P.
 minute-scabiosum (fide Yuncker, 1950)]
- mirabile Trel., Contr. U.S. Nat. Herb. 26(4): 154. 1929. TYPE:

 Costa Rica, Santa Clara de Cartago. El. 1950 m. 20 July
 1923. Maxon & Harvey 8246 (HT: US 1181894; IT: ILL).-
 [= P. euryphyllum C.DC. (fide Burger, 1971)]
- mishuyacuense Trel. in Macbr., Field Mus. Publ. Bot. 13(No.
 357): 192. 1936. TYPE: Peru, Loreto, Mishuyacu near Iquitos.
 El. 100 m. 24-28 Sep. 1929. Killip & Smith 29903 (HT: US;
 IT: ILL).
- mitifolium Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 192. 1936. TYPE: Peru, Junin, La Merced. El. 700 m.
 10-24 Aug. 1923. Macbride 5325 (HT: F 536350; IT: ILL; PT at
 ILL: Stevens 204).
- * molanoi Trel. & Yuncker, Piperaceae no. S. Amer. 1: 127, fig.

 102. 1950. TYPE: Colombia, Nariño, Gorgonilla Island.

 El. 130-200 m. 8 Feb. 1939. Killip, García & Molano 33119
 (LECTOTYPE designated herein: US 1770110 (fig. 102); ILT:
 ILL).

- monteluctans Trel. in Yuncker, Field Mus. Publ. Bot. 17: 347.

 1938. TYPE: Honduras, Comayagua, creeping over logs in forest, cloud zone on range above El Achote, near Siguatepeque. El. 1800 m. Yuncker, Dawson & Youse 6176 (HT: ILL).
- monurum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 336, fig.

 306. 1950. TYPE: Ecuador, Esmeraldas, Parroquia Concepción,
 Playa Rica. El. 105 m. 21 Dec. 1936. Mexia 8477-a (HT: CH;
 IT: ILL).
- morator Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 194.

 1936. TYPE: Peru, Junin, San Ramón. El. 900-1300 m.
 9, 12 June 1929. Killip & Smith 24743 (HT: US; IT: ILL).
- * morianum Trel., J. Arnold Arb. 9: 148. 1928. TYPE: New Guinea, Papua, Lower Mori River. 28 May 1926. Brass 1562 (LECTOTYPE designated herein: A; ILT: ILL).-- [= P. macropiper (fide Chew, 1972)]
 - multinervium M. Martens & Galeotti var. amplum Trel. in Yuncker, Field Mus. Publ. Bot. 17: 347. 1938. TYPE: Guatemala, Petén, La Libertad. 7 April 1933. Lundell 2556 (HT: MICH; IT: ILL).-- [= P. aduncum (fide Standley & Steyerm., 1952)]
 - multinervium var. cayoense Trel. in Yuncker, Field Mus. Publ.

 Bot. 17: 347. 1938. TYPE: British Honduras (Belize), El
 Cayo. 19 Feb. 1931. Bartlett 11570 [HT: MICH; IT (2 sheets): ILL].
 - <u>multinervium</u> var. <u>flavicans</u> Trel. in Yuncker, Field Mus. Publ.
 Bot. 17: 348. 1938. TYPE: Honduras, Comayagua, Siguatepeque.
 El. 1200 m. 14 July 1936. <u>Yuncker</u>, <u>Dawson & Youse 5859</u> (HT: ILL).
 - multinervium var. hirsuticaule Trel. in Yuncker, Field Mus.

 Publ. Bot. 17: 348. 1938. TYPE: Honduras, Comayagua,
 Siguatepeque. El. 1050 m. 8 July 1936. Yuncker, Dawson &
 Youse 5724 (HT: ILL; PT at ILL: Yuncker, Dawson & Youse
 5699).
 - multinervium var. kantelolense Trel. in Yuncker, Field Mus.

 Publ. Bot. 17: 348. 1938. TYPE: Guatemala, Petén, La
 Libertad. 25 April 1933. Lundell 3008 (HT: MICH; IT: ILL;
 PT at ILL: Lundell 3168).-- [= P. aduncum (fide Standley &
 Steyerm., 1952)]

- * multinervium var. peracutum Trel. in Yuncker, Field Mus. Publ.

 Bot. 17: 349. 1938. TYPE: Honduras, Atlantida, Lancetilla
 Valley near Tela. El. 20-600 m. 1927-1928. Standley 54921
 (HT, or LECTOTYPE designated herein: ILL; PT at ILL: Standley 53083).
 - multinervium var. productipes Trel. in Yuncker, Field Mus. Publ.

 Bot. 17: 349. 1938. TYPE: Honduras, Comayagua, near El
 Achote above Siguatepeque. El. 1350 m. 13 July 1936.

 Yuncker, Dawson & Youse 5819 (HT: ILL).
 - multinervium var. protractifolium Trel. in Yuncker, Field Mus.

 Publ. Bot. 17: 349. 1938. TYPE: Honduras, Comayagua, above
 Siguatepeque. El. 1050 m. 5 July 1936. Yuncker, Dawson &
 Youse 5668 (HT: ILL).
 - multinervium var. puberulipedunculum Trel. in Yuncker, Field

 Mus. Publ. Bot. 17: 349. 1938. TYPE: Honduras, Comayagua, El
 Achote, above Siguatepeque. El. 1350 m. 15 July 1936.

 Yuncker, Dawson & Youse 5876 (HT: ILL).
 - <u>multinervium</u> var. <u>pubescenticaule</u> Trel. in Yuncker, Field Mus.
 <u>Publ. Bot. 17: 350. 1938. TYPE: Honduras, Comayagua, Siguatepeque. El. 1050 m. 8 July 1936. Yuncker, Dawson & Youse 5731 (HT: ILL).</u>
 - multinervium var. skutchii Trel. in Yuncker, Field Mus. Publ.

 Bot. 17: 350. 1938. TYPE: Guatemala, Quezaltenango,
 Colombia. El. 900 m. 24 Sep. 1934. Skutch 1299 (HT:
 ILL).-- [= P. aduncum (fide Standley & Steyerm., 1952)]
 - multinervium var. tamashense Trel. in Yuncker, Field Mus. Publ.

 Bot. 17: 350. 1938. TYPE: British Honduras (Belize), Tamash
 River. El. 30 m. 10 March 1935. Schipp 1382 (HT: ILL).
 - multinervium var. telanum Trel. in Yuncker, Field Mus. Publ.

 Bot. 17: 350. 1938. TYPE: Honduras, Atlantida, Tela.

 El. 20-600 m. 1926, 1927. Standley 53264 (HT: F; IT: ILL; PT at ILL: Yuncker 4498, 4512).
 - multitudinis Trel., Ciencia (Mexico) 2: 207. 1941. TYPE: Peru,
 Chanchamayo. 23 Oct. 1863. <u>Isern</u> 2181-c (HT: MA; probable IT: ILL).
 - multitudinis [var.] latum Trel., Ciencia (Mexico) 2: 207. 1941.

 TYPE: Peru, Chanchamayo. 23 Oct. 1863. Isern 2181-b (HT: MA; IT: ILL).

- munchanum C.DC. in DC. var. latum Trel. in Macbr., Field Mus.

 Publ. Bot. 13(No. 357): 195. 1936. TYPE: Peru, San Martín,
 San Roque. El. 1350-1500 m. Jan.-Feb. 1930. Williams 6954
 (HT: F 623002; IT: ILL).-- [This species recognized by Trel.
 & Yuncker, 1950]
- munyanum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 195. 1936. TYPE: Peru, Huánuco, Muña. El. 2400 m. 5-7 June 1923. Macbride 4272 (HT: F 535354; IT: ILL).
- musteum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 196.
 1936. TYPE: Peru, Loreto, Santa Rosa. El. 135 m. 1-5 Sep.
 1929. Killip & Smith 28982 (HT: US; IT: ILL).
- mutisii Trel. & Yuncker, Piperaceae no. S. Amer. 1: 414, fig. 377. 1950. TYPE: Colombia. Mutis 3463 (HT: MA; IT: ILL).-[This species recognized by Burger, 1971]
- mystaciferum Trel. in Yuncker, Field Mus. Publ. Bot. 17: 350. 1938. TYPE: Honduras, Comayagua, ravine at El Rincon, 10 miles W of Siguatepeque. El. 1300-1400 m. 24 July 1936. Yuncker, Dawson & Youse 6054 (HT: ILL).
- nanayanum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 196. 1936. TYPE: Peru, Loreto, S bank of Río Amazonas,
 Nanay. May-June 1929. Williams 516 (HT: F 603936; IT: ILL).
- * nanegalense Trel. & Yuncker, Piperaceae no. S. Amer. 1: 25, fig. 15. 1950. TYPE: Ecuador, Pichincha, Nanegal. El. 1600 m. 1908. Mille s.n. [LECTOTYPE designated herein (fig. 15): ILL; ILT: ILL].
- * negritosense Trel. in Cuf., Archivio Bot. Sist. Fitogeog. & Genet. 10: 25. 1934. TYPE: Costa Rica, "La Castilla-Los Negritos". El. 20 m. 8 May 1930. Cufodontis 528 (HT, or LECTOTYPE designated herein: ILL).-- [= P. dryadum C.DC. (fide Burger, 1971)]
 - <u>niceforoi</u> Trel. & Yuncker, Piperaceae no. S. Amer. 1: 79, fig. 66. 1950. TYPE: Colombia, Norte de Santander, Cúcuta. Feb. 1940. <u>Nicéforo 49</u> (HT: ILL; PT at ILL: <u>Killip</u>, <u>Dugand & Jaramillo 38293</u>).
 - nicoyanum C.DC., Bot. Gaz. 70: 174. 1920. TYPE: Costa Rica,
 Bords des chemins à Nicoya. Pittier 13689, 13696 [Syntypes,
 perhaps to be lectotypified; fragment of Tonduz (= Pittier?)
 13689 (from LE) at ILL].-- [= P. amalago (fide Burger, 1971)]

- nigro-granulatum Trel. in Rusby, Mem. N.Y. Bot. Gard. 7: 224.

 1927. TYPE: Bolivia, Bopi River Valley. El. 3000 ft.

 Sep. 1921. Rusby 573 (HT: NY; IT: ILL).-- [= P. lanceolatum Ruiz & Pavón (fide Yuncker, 1955)]
- nitidulifolium Trel. ex Standley in Standley & Record, Field
 Mus. Publ. Bot. 12: 408. 1936. TYPE: British Honduras
 (Belize), Tower Hill. 1928. Karling 26 (HT: F; IT: ILL).-[- P. aeruginosibaccum (fide Standley & Steyerm., 1952);
 P. jacquemontianum (cf. Burger, 1971)]
- <u>nobile</u> C.DC. in DC. var. <u>glabratum</u> Yuncker in Trel. & Yuncker, Piperaceae no. S. Amer. 1: 150. 1950. TYPE: Colombia, Antioquia, Río Samaná, 2 km above Argelia. El. ca 2560 m. May-June 1944. Ewan 15771 (HT: ILL).
- <u>nobile</u> var. <u>parvulum</u> Trel. & Yuncker, Piperaceae no. S. Amer. 1: 151. 1950. TYPE: Venezuela, Distr. Fed., El Junquito. El. ca 1925 m. 26 March 1943. <u>Killip & Rohl</u> 37177 (HT: US 1855347; IT: ILL).
- nonconformans Trel., J. Wash. Acad. Sci. 19: 334. 1929. TYPE:
 Honduras, Comayagua, near Siguatepeque. El. 1100 m.
 Feb. 1928. Standley 55906 (HT: F; IT: ILL).
- nottirbanum Trel. ex Stehlé, Bull. Soc. Bot. France 85: 576.
 1939 (nomen); Fl. Descr. Antill. Fr. 2(1): 103. 1940; Bull.
 Agric. Martinique 9(3): 180. 1940. TYPE: Guadeloupe,
 Malanga. Stehlé & Stehlé 1748 [HT: ILL (annotated as such by
 Howard, but this is only a sterile stem with a single
 leaf)].-- [= P. glabrescens (fide Howard, 1973)]
- novae-helvetiae Trel. in Woodson & Schery, Ann. Mo. Bot. Gard.

 27: 294. 1940. TYPE: Panama, Chiriquí, vicinity of "New Switzerland", Río Chiriquí Viejo Valley. El. 1800-2000 m.

 6 Jan. 1939. Allen 1359 (HT: ILL; PT at ILL: Allen 1416).-[= P. crassinervium Kunth (fide Yuncker, 1950)]
- <u>nubigaudens</u> Trel. in Yuncker, Field Mus. Publ. Bot. 17: 351.
 1938. TYPE: Honduras, Comayagua, El Achote, near
 Siguatepeque. El. 1800 m. 21 July 1936. Yuncker, Dawson & Youse 5991 (HT: ILL).
- nubigenum Kunth var. brevifolium Trel. & Yuncker, Piperaceae no.

 S. Amer. 1: 354. 1950. TYPE: Colombia, Boyacá, Puente de
 Boyacá. El. 2800 m. 24 Feb. 1940. Arbeláez & Cuatrecasas
 8075 (HT: US 1774594; PT at ILL: Ecuador, Isern 1004).

- nudibracteatum C.DC. var. micropuberulum Trel. & Yuncker,
 Piperaceae no. S. Amer. 1: 152. 1950. TYPE: Colombia, El
 Valle, La Cumbre. El. 1800-2100 m. May 1922. Pennell &
 Killip 5868 [HT: US 1141960; IT: ILL (2 sheets)].
- nudibracteatum var. pubescens Trel. & Yuncker, Piperaceae no. S.
 Amer. 1: 152. 1950. TYPE: Colombia, Cauca, Cauca Valley.
 El. 1500-1600 m. 27 June 1922. Pennell & Killip 7226 [HT: US 1142297; PT at ILL: Figueroa 915; Killip, García & Lora 33708).
- nuncupatum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 197. 1936. TYPE: Peru, Junin, Pichis Trail, Yapas. El. 1350-1600 m. 28, 29 June 1929. Killip & Smith 25577 (HT: US; IT: ILL).
- oblanceolatum Trel., Contr. U.S. Nat. Herb. 26(4): 175. 1929.

 TYPE: Costa Rica, Guanacaste, Los Ayotes, Tilarán.
 El. 650 m. 21 Jan. 1926. Standley & Valerio 45558 (HT: US 1307380; IT: ILL).-- [This species recognized by Burger, 1971]
- oblongatifolium Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 198. 1936. TYPE: Peru, Loreto, valley of Río Marañón. El. 150 m. Aug.-Sep. 1929. Leg. Dennis; Killip & Smith 29153 (HT: US; IT: ILL).
- oblongatilimbum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 198. 1936. TYPE: Peru, Loreto, Yurimaguas to Balsapuerto. El. 135-150 m. 26-31 Aug. 1929. Killip & Smith 28237 (HT: US; IT: ILL).
- <u>obovatifolium</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 199. 1936. TYPE: Peru, Loreto, Santa Rosa. El. 135 m. 1-5 Sep. 1929. <u>Killip & Smith</u> 28980 (HT: US; IT: ILL; PT at ILL: <u>Killip & Smith</u> 28096).
- <u>obrutum</u> Trel. & Yuncker, Piperaceae no. S. Amer. 1: 324, fig. 289. 1950. TYPE: Colombia, Santander, northern slopes of Mesa de los Santos. El. 1000-1500 m. Dec. 1926. <u>Killip</u> & <u>Smith</u> 15379 (HT: CH; IT: ILL).
- obsessum Trel., J. Wash. Acad. Sci. 19: 334. 1929. TYPE:
 Honduras, Atlantida, Lancetilla Valley near Tela. El. 100 m.
 22 Jan. 1928. Standley 54925 (HT: F 584233; IT: ILL).-[= P. fraguanum (fide Standley & Steyerm., 1952);
 = P. sancti-felicis (fide Burger, 1971)]

- occultum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):

 199. 1936 (erroneously printed as Peperomia). TYPE: Peru,
 Loreto, near Iquitos. El. 120 m. July 1929. Williams 1406
 (HT: F 617357; IT: ILL).
- ocoanum Trel. in Feddes Repert. Spec. Nov. Regni Veg. 29: 29.

 1931. TYPE: Santo Domingo, Bejucal, S. José de Ocoa, Azua.
 El. 1300 m. 25 March 1929. Ekman 12046 (HT: ILL).
- oculatispicum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 200. 1936. TYPE: Peru, Loreto, Iquitos. El. 120 m. March-April 1930. Williams 7954 (HT: F 629718; IT: ILL).
- offensum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 200. 1936. TYPE: Peru, Loreto, Balsapuerto. El. 150-350 m.
 28-30 Aug. 1929. Killip & Smith 28426 (HT: US; IT: ILL).
- omega Trel., Contr. U.S. Nat. Herb. 26(4): 146. 1929. TYPE:
 Costa Rica, San José, La Hondura. March 1924. Standley
 37800 (HT: US 1229449; PT at ILL: Standley & Valerio
 50940).-- [= P. carrilloanum (fide Burger, 1971)]
- onerosum Trel., J. Wash. Acad. Sci. 19: 335. 1929. TYPE:

 Honduras, Atlántida, near Tela, at sea level. 27 Dec. 1927.

 Standley 53696 (HT: F 582949; IT: ILL; PT at ILL: Standley

 52682, 55022, 56621).-- [= P. aeruginosibaccum (fide Standley
 & Steyerm., 1952); = P. jacquemontianum (cf. Burger, 1971)]
- opacibracteum Trel., Contr. U.S. Nat. Herb. 26(4): 148. 1929.

 TYPE: Costa Rica, Guanacaste, La Tejona, N of Tilarán.
 El. 600-700 m. 25 Jan. 1926. Standley & Valerio 45899 (HT: US 1307414; IT: ILL).-- [= P. xanthostachyum C.DC. (fide Burger, 1971)]
- ornatispicum Trel. in Yuncker, Field Mus. Publ. Bot. 17: 351.

 1938. TYPE: Honduras, Comayagua, thicket on river bank near
 Siguatepeque. El. 1050 m. 3 July 1936. Yuncker, Dawson &
 Youse 5618 (HT: ILL).
- ornithorhynchum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 201. 1936. TYPE: Peru, Ayacucho, Carrapa. El. 1500 m. May 1929. Killip & Smith 22334 (HT: US; IT: ILL; PT at ILL: Killip & Smith 23221).
- ostii Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 201.

 1936. TYPE: Peru, Loreto, mouth of Río Santiago.
 El. 200 m. 24 Nov. 1931. Mexia 6152 (HT: UC; IT: ILL).

- ottonoides Yuncker, Bol. Inst. Bot. (São Paulo) 3: 109, fig. 95. 1966. TYPE: Brazil, Pará, Remansão do Centro, E Ferro Tocantins. 1 Oct. 1948. Fróes 23592 (HT: IAN; PT at ILL: Minas Gerais, Mexia 5332).-- [This species upheld by Yuncker, 1973]
- pachyphloium C.DC. in Kuntze var. macrophyllum Yuncker, Lilloa 27: 107, pl. 4(1). [1953] 1955. TYPE: Bolivia, Cochabamba, Tungas of Tana Mayu. El. 1800 m. 24 June 1947. Cárdenas 3970 (HT: US 1903317; PT at ILL: Cárdenas 2161).
- paganicum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 202. 1936. TYPE: Peru, Loreto, Iquitos. El. 100 m.
 3-11 Aug. 1929. Killip & Smith 27432 (HT: US; IT: ILL).
- pallididorsum Trel. in Macbr., Field Mus. Publ. Bot. 13(No.
 357): 202. 1936. TYPE: Peru, Junín, La Merced, Schunke
 Hacienda. El. 1300 m. Aug.-Sep. 1923. Macbride 5801 (HT: F
 536830; IT: ILL).
- <u>paludicola</u> Trel. in Yuncker, Field Mus. Publ. Bot. 17: 351.
 1938. TYPE: Honduras, Atlántida, in marsh near Tela. 9 Aug.
 1934. Yuncker 4977 (HT: ILL).
- pamploanum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 116, fig. 90. 1950. TYPE: Colombia, Norte de Santander, western slope of Páramo del Hatico en route from Toledo to Pamplona. El. 2800-2900. 13 March 1927. Killip & Smith 20720 (HT: US 1355716; IT: ILL).
- papillipetiolatum Trel. in Macbr., Field Mus. Publ. Bot. 13(No.
 357): 203. 1936. TYPE: Peru, Loreto, Iquitos. El. 100 m.
 3-11 Aug. 1929. Killip & Smith 27407 (HT: US; IT: ILL).
- papulaecaule Trel. in Standley, Field Mus. Publ. Bot. 18: 352.
 1937. TYPE: Costa Rica, Guanacaste, Hacienda Santa María.
 El. 720-920 m. 23 Jan. 1930. Dodge & Thomas 6286 (HT: GH;
 IT: ILL).-- [= P. chrysostachyum (fide Burger, 1971)]
- paranapuranum Trel. in Macbr., Field Mus. Publ. Bot. 13(No.
 357): 204. 1936. TYPE: Peru, Loreto, Río Paraná-pura near
 Yurimaguas. El. 180 m. 24 Oct. 1931. Mexia 6075 (HT: UC;
 IT: ILL).

- parcepilosum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 204. 1936. TYPE: Peru, Junin, Carpapata. El. 2700-3200 m.
 7 June 1929. Killip & Smith 24385 (HT: US; IT: ILL).
- parcum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 311, fig.
 277. 1950. TYPE: Ecuador, Los Rios, near Quevedo, Cantón
 Vinces. El. 60 m. 2 Nov. 1924. Mexia 6604 (HT: US
 1619067; IT: ILL).
- partiticuspe Trel. in Woodson & Schery, Ann. Mo. Bot. Gard. 27:
 294. 1940. TYPE: Panama, Coclé, El Valle de Antón. 8 Dec.
 1938. Allen 1195 (HT: ILL).-- [This species recognized by Yuncker, 1950]
- paso-anchoense Trel. in Woodson & Schery, Ann. Mo. Bot. Gard.
 27: 295. 1940. TYPE: Panama, Chiriquí, trail from Paso Ancho
 to Monte Lirio, upper valley of Río Chiriquí Viejo. 16 Jan.
 1939. Allen 1579 (HT: ILL).-- [= P. chiriquinum C.DC. (fide
 Yuncker, 1950); = P. aequale (fide Burger, 1971)]
- patentifolium Trel. in Macbr., Field Mus. Publ. Bot. 13(No.
 357): 205. 1936. TYPE: Peru, Junin, Hacienda Calhuapuquio.
 8 Dec. 1924. Stevens 136 (HT: ILL; PT at ILL: Stevens 148).
- * patulum Bertol. var. cordifolium Trel. in Standley, J. Wash.
 Acad. Sci. 13: 366. 1923. TYPE: El Salvador, Sonsonate,
 vicinity of Nahulingo. 21 March 1922. Standley 22046 (HT,
 or LECTOTYPE designated herein: ILL).-- [The species
 recognized by Standl. & Steyerm. (1952); = P. marginatum
 (fide Burger, 1971)]
 - paucartamboanum Trel. in Macbr., Field Mus. Publ. Bot. 13(No.
 357): 205. 1936. TYPE: Peru, Junin, near Perené Bridge, Río
 Paucartambo Valley. El. 700 m. 19 June 1929. Killip &
 Smith 25388 (HT: US; IT: ILL).
 - <u>pauciramosum</u> Yuncker, Bol. Inst. Bot. (São Paulo) 3: 60, fig. 50. 1966. TYPE: Brazil, Minas Gerais, District Ilhéus, Faz. da Tabunha. El. 300 m. 13 Aug. 1930. <u>Mexia</u> <u>4973</u> [HT: NY; IT: ILL; PT at ILL: <u>Hoehne</u> <u>19524</u> (2 sheets)]. [This species upheld by Yuncker, 1972]
- * pavimentifolium Trel., J. Arnold Arb. 9: 148. 1928. TYPE: New Guinea, Papua, Murua River. El. 100 m. 29 March 1926.

 Brass 1338 (LECTOTYPE designated herein: A; ILT: ILL).
 - pebasense Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 206. 1936. TYPE: Peru, Loreto, Pebas on the Amazon River.
 July 1929. Williams 1746 (HT: F 608248; IT: ILL).

- pelliticaule Trel., Contr. U.S. Nat. Herb. 26(4): 157. 1929.
 TYPE: Costa Rica, Alajuela, vicinity of Fraijanes.
 El. 1500-1700 m. Feb. 1926. Standley & Torres 47539 (HT: US 1307499; IT: ILL).-- [= P. bredemeyeri (fide Burger, 1971)]
- <u>peltilimbum</u> Yuncker, Lilloa 27: 155, pl. 37. [1953] 1955. TYPE: Bolivia, La Paz, S. Yungas, Colaya. El. 1780 m. 14 Dec. 1935. Mexia 7823 (HT: US 1778383; IT: ILL).
- pendentispicum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 157, fig. 136. 1950. TYPE: Colombia, Norte de Santander, Culagá Valley above Tapatá. El. ca 2300 m. 5, 6 March 1927. Killip & Smith 20338 (HT: US 1355402; IT: ILL).
- pendentispicum var. tejamesmeanum Trel. & Yuncker, Piperaceae
 no. S. Amer. 1: 158. 1950. TYPE: Colombia, Norte de
 Santander, road from Pamplona to Toledo, etc. El. 28003000 m. Feb. 1927. Killip & Smith 20006 (HT: US 1355155;
 IT: ILL).
- <u>pennellii</u> Trel. & Yuncker, Piperaceae no. S. Amer. 1: 121, fig. 95. 1950. TYPE: Colombia, Caldas, Salento. El. 1400-1700 m. 31 July 1922. <u>Pennell</u> 9056 (HT: US 1142766; IT: ILL).
- penyasense Trel. & Yuncker, Piperaceae no. S. Amer. 1: 207.

 1950. TYPE: Colombia, Antioquia, Peñas Blancas. 26 April
 1926. Woronow & Juzepczuk 4570 (HT: LE; fragment of type at ILL).
- perbrevispicum Yuncker in Trel. & Yuncker, Piperaceae no. S.
 Amer. 1: 226, fig. 190. 1950. TYPE: Colombia, Antioquia,
 Turbo. El. 300 m. 23 April 1946. Haught 4809 (HT: ILL).
- perciliatum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 326,
 fig. 293. 1950. TYPE: Venezuela, Amazonas, San Carlos de Río
 Negro. El. 100 m. 7 March 1942. Williams 14683 (HT: US
 1878477; IT: ILL).
- percostatum Yuncker, Lilloa 27: 157, pl. 39. [1953] 1955. TYPE:
 Bolivia, La Paz, Mapiri. El. 1500 m. May 1886. Rusby 2174
 [HT: US 79650; PT at ILL: Buchtien 574 (2 sheets), 581].
- perenense Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 207. 1936. TYPE: Peru, Junin, Colonia Perené. El. 600 m.
 16-18 June 1929. Killip & Smith 25108 (HT: US; IT: ILL; PT at ILL: Killip & Smith 26442).
- perenense var. cupulifolium Trel. in Macbr., Field Mus. Publ.
 Bot. 13(No. 357): 207. 1936. TYPE: Peru, Junín, La Merced.
 El. 700 m. May-June 1929. Killip & Smith 23698 (HT: US; IT: ILL).

- perfugii Trel. in Woodson & Schery, Ann. Mo. Bot. Gard. 27: 295.
 1940. TYPE: Panama, Chiriqui, vicinity of Casita Alta,
 Volcán de Chiriqui. El. 1500-2000 m. June 1938. Woodson,
 Allen & Seibert 928 (HT: ILL).-- [= P. hirtellipetiolum C.DC.
 var. harveyanum (Trel.) Yuncker, 1950; = P. tenuimucronatum
 C.DC. (fide Burger, 1971)]
- pergamentifolium Trel. & Standley in Standley & Steyerm.,
 Fieldiana Bot. 24 (3): 314. 1952. TYPE: Guatemala,
 Quezaltenango, Volcán de Zunil. 31 July 1934. Skutch 876
 (HT: F; IT: ILL).
- perinaequilongum Trel. in Standley, Field Mus. Publ. Bot. 10:
 160. 1931. Type locality: Honduras, Lancetilla Valley. No
 type cited; probably lectotypification needed (authentic
 specimens at ILL: near Tela, Standley 54419, 54897, 56893).
- permucronatum Yuncker, Bol. Inst. Bot. (São Paulo) 3: 11, fig. 9. 1966. TYPE: Brazil, Rio de Janeiro, Tijuca, Bom Retiro. 7 Nov. 1946. Rosa 79 (HT: R; PT at ILL: Lutz 27; Sampaio, Freire, Peckolt & Costa 490).-- [This species upheld by Yuncker, 1972]
- <u>pernigricans</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 207. 1936. TYPE: Peru, Loreto, Mishuyacu. El. 100 m. 24-28 Sep. 1929. <u>Killip & Smith</u> 29976 (HT: US; IT: ILL).
- pernodosum Yuncker in Trel. & Yuncker, Piperaceae no. S. Amer.
 1: 206, fig. 168. 1950. TYPE: Colombia, Albán. 28 Jan.
 1947. Silvano Jorge 45 (HT: ILL).
- <u>pernodulosum</u> Trel. & Yuncker, Piperaceae no. S. Amer. 1: 120, fig. 94. 1950. TYPE: Colombia, Cundinamarca, Aguadita. 28 Nov. 1939. <u>Laureano Javier 34</u> (HT: ILL).
- perobumbratum Trel. in Standley, Field Mus. Publ. Bot. 22(1):
 11. 1940. TYPE: Brazil, Rio de Janeiro. Pohl 4772 [HT: W;
 IT: ILL (2 sheets)].-- [= P. arboreum Aublet (fide Yuncker, 1973)]
- perpallidum Ekman, Urban & Trel. in Feddes Repert. Spec. Nov.
 Regni Veg. 23: 305, 309. 1927. TYPE: Haiti, Sud, Riviere
 Bras Gauche, Trouin. 11 May 1924. Ekman 2365 (HT: ILL; PT
 at ILL: Ekman 5093).

- perpunctulatum Trel. in Macbr., Field Mus. Publ. Bot. 13(No.
 357): 207. 1936. TYPE: Peru, Loreto, Yurimaguas to
 Balsapuerto. El. 135-150 m. 26-31 Aug. 1929. Killip &
 Smith 28090 (HT: US; IT: ILL).-- [The specimen at ILL is
 marked in Trelease's handwriting "- conditum", and this
 number is also cited as a PT of P. conditum]
- perpurgatum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 208. 1936. TYPE: Peru, Loreto, San Antonio, on Río Itaya.
 El. 110 m. 18 Sep. 1929. Killip & Smith 29455 (HT: US; IT: ILL; PT at ILL: Killip & Smith 29461, 29707).
- perspicuibracteum Trel., J. Wash. Acad. Sci. 19: 335. 1929.

 TYPE: Honduras, Atlántida, Lancetilla Valley near Tela.
 El. 100 m. 21 Jan. 1928. Standley 54872 (HT: F 584074; IT: ILL).
- pertractatum Trel., Contr. U.S. Nat. Herb. 26(4): 130. 1929.

 TYPE: Costa Rica, Alajuela, Nuestro Amo. Feb. 1919. Jiminez
 s.n. (HT: US 1080638; PT at ILL: Standley & Valerio 45694,
 45710).-- [= P. pseudo-lindenii C.DC. (fide Burger, 1971)]
- peruligerum Trel. in Woodson & Schery, Ann. Mo. Bot. Gard. 27:
 295. 1940. TYPE: Panama, Bocas del Toro, Isla de Colón.
 El. 25-75 m. Aug. 1938. Woodson, Allen & Seibert 1939 (HT:
 MO; fragments of type at ILL).-- [This species recognized by
 Yuncker, 1950]
- perverrucosum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 282,
 fig. 247. 1950. TYPE: Colombia, Norte de Santander, Calugá
 Valley near Tapatá (N of Toledo). El. 1500-2100 m.
 3-8 March 1927. Killip & Smith 20350 (HT: US 1355408; IT:
 ILL; PT at ILL: Killip & Smith 19827).
- pervicax Trel. in Woodson & Schery, Ann. Mo. Bot. Gard. 27: 296.
 1940. TYPE: Panama, Chiriquí, vicinity of Casita Alta,
 Volcán de Chiriquí. El. 1500-2000 m. Woodson, Allen &
 Seibert 843 (HT: ILL).-- [* P. hispidum (fide Yuncker, 1950
 and 1957)]
- pervillosum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 208. 1936. TYPE: Peru, San Martín, San Roque. El. 1350 1500 m. Jan.-Feb. 1930. Williams 6963 (HT: F 622979; IT:
 ILL).
- pervulgatum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 209. 1936. TYPE: Peru, Loreto, Mishuyacu near Iquitos.
 El. 100 m. Klug 468 (HT: F 629836; PT at ILL: Killip & Smith 29312; Williams 1889).

- pervulsum Trel. & Yuncker var. santosense Trel. & Yuncker,
 Piperaceae no. S. Amer. 1: 338. 1950. TYPE: Colombia,
 Santander, Mesa de los Santos. El. 1500 m. Dec. 1926.
 Killip & Smith 15363 (HT: US 1351246; IT: ILL).
- petens Trel. in Yuncker, Field Mus. Publ. Bot. 17: 352. 1938.
 TYPE: Honduras, Comayagua, El Achote, above Siguatepeque.
 El. 1350 m. 26 July 1936. Yuncker, Dawson & Youse 6107 (HT: ILL).
- <u>phaneropus</u> Trel. in Standley, Field Mus. Publ. Bot. 18: 354.
 1937. TYPE: Costa Rica, 5 miles S of Santa María de Dota.
 El. 1980 m. 2 May 1928. <u>Stork 1775</u> (HT: ILL).-- [= P. epigynium C.DC., a glabrous form (fide Burger, 1971)]
- phegophyllum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 209. 1936. TYPE: Peru, Junín, Puerto Bermúdez. El. 375 m.
 14-17 July 1929. Killip & Smith 26479 (HT: US; IT: ILL).
- <u>picardae</u> C.DC. in Urban var. <u>pilinervium</u> Trel. in Feddes Repert.
 Spec. Nov. Regni Veg. 23: 309. 1927. TYPE: Haiti, Motagne
 Noire, La Selle. El. 1700 m. 4 Sep. 1924. <u>Ekman 1769</u> (HT: ILL).
- <u>pichisense</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 210. 1936. TYPE: Peru, Junín, Pichis Trail, San Nicolás. El. 1100 m. 4-5 July 1929. <u>Killip & Smith</u> 26012 (HT: US; IT: ILL).
- pictamentum Trel. in Yuncker, Field Mus. Publ. Bot. 17: 352.
 1938. TYPE: Honduras, Comayagua, Siguatepeque. El. 1100 m.
 17 July 1936. Yuncker, Dawson & Youse 5902 (HT: ILL).-[= P. achoteanum (fide Standley & Steyerm., 1952)]
- <u>pictamentum</u> var. <u>fluminis</u> Trel. in Yuncker, Field Mus. Publ. Bot. 17: 352. <u>1938</u>. TYPE: Honduras, Comayagua, Siguatepeque. El. 1100 m. 8 July 1936. <u>Yuncker</u>, <u>Dawson & Youse 5718</u> (HT: ILL).
- piedecuestanum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 227,
 fig. 191. 1950. TYPE: Colombia, Santander, vicinity of
 Piedecuesta. El. 980 m. Dec. 1926. Killip & Smith 15445
 (HT: US 1351320; IT: ILL; PT at ILL: Cuatrecasas & García
 Barriga 9869.)
- piluliferifolium Trel. & Yuncker, Piperaceae no. S. Amer. 1:
 315, fig. 281. 1950. TYPE: Colombia, Putumayo, Umbria.
 El. 325 m. Oct.-Nov. 1930. Klug 1765 (HT: US 1518013; PT at ILL: Cuatrecasas 11176).

- pinaresanum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 202,
 fig. 162. 1950. TYPE: Colombia, Caldas, Pinares, near
 Salento. El. 2600-2900 m. Aug. 1922. Pennell 9205 [HT: US
 1142797; IT: ILL (2 sheets)].
- <u>piritubanum</u> Yuncker, Bol. Inst. Bot. (São Paulo) 3: 61, fig. 51.
 1966. TYPE: Brazil, São Paulo, Pirituba. 14 Dec. 1913.
 <u>Brade 7181</u> (cited as <u>Brade s.n.</u>) (HT: ILL).-- [This species upheld by Yuncker, 1972]
- piscatorum Trel. ex L. Williams, Explor. Bot. Guayana
 Venezolana, 176. 1942 (nomen subnudum); in Trel. & Yuncker,
 Piperaceae no. S. Amer. 1: 395, fig. 356. 1950. TYPE:
 Venezuela, Bolívar, La Prisión. El. 120 m. 3 April 1939.
 Williams 11685 (HT: US 1459788; IT: ILL; PT at ILL: Williams 11258).
- <u>pitalitoense</u> Yuncker in Trel. & Yuncker, Piperaceae no. S. Amer. 1: 309, fig. 275. 1950. TYPE: Colombia, Huila, Pitalito, Quinche. El. 1300 m. 30 Dec. 1942. <u>Schultes & Villarreal</u> 5101 (HT: GH; IT: ILL).
- planipes Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 210. 1936. TYPE: Peru, Junin, Colonia Perené. El. 680 m.
 14-22 June 1929. Killip & Smith 24928 (HT: US; IT: ILL).
- platannanum Trel. in Feddes Repert. Spec. Nov. Regni Veg. 23:
 308, 312. 1927. TYPE: Haiti, Mt. Platanna, S. Michel de
 1'Atalaye. El. 350 m. 7 Dec. 1925. Leonard 7818 (HT: ILL;
 PT at ILL: Leonard 7809).
- pleninervosum Trel. in Macbr., Field Mus. Publ. Bot. 13(No.
 357): 211. 1936. TYPE: Peru, Loreto, Puerto Arturo.
 El. 135 m. 24-25 Aug. 1929. Killip & Smith 27875 (HT: US;
 IT: ILL).
- plumbeicolor Trel. in Standley, Field Mus. Publ. Bot. 17: 233.
 1937. TYPE: Guatemala, Petén, near El Paso. 7 April 1933.
 Lundell 2554 (HT: ILL).-- [= P. aeruginosibaccum Trel. (fide Standley & Steyerm., 1952); = P. jacquemontianum (cf. Burger, 1971)]
- politaereum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 211. 1936. TYPE: Peru, Junín, San Ramón, Schunke Hacienda. El. 1400-1700 m. 8-12 June 1929. Killip & Smith 24545 (HT: US; IT: ILL; PT at ILL: Killip & Smith 23905, 24553).
- politaereum var. elongatum Trel. in Macbr., Field Mus. Publ.

 Bot. 13(No. 357): 211. 1936. TYPE: Peru, Loreto, Soledad.

 El. 110 m. 20-22 Sep. 1929. Killip & Smith 29587 (HT: US; IT: ILL).

- <u>politaereum</u> var. <u>mucronatum</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 211. 1936. TYPE: Peru, Loreto, San Antonio, Río Itaya. El. 110 m. 18 Sep. 1929. <u>Killip</u> & Smith 29460 (HT: US; IT: ILL).
- ponganum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 212. 1936. TYPE: Peru, Loreto, Pongo de Manseriche.
 El. 200 m. 19 Nov. 1931. Mexia 6123 (HT: UC; IT: ILL).
- pontis Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 212. 1936. TYPE: Peru, Junín, near Perené Bridge, Río Paucartambo Valley. El. 700 m. 19 June 1929. Killip & Smith 25294 (HT: US; IT: ILL).
- portalense Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 213. 1936. TYPE: Peru, Loreto, Portal, lower Río Huallaga.
 El. 135 m. 5-11 Sep. 1929. Killip & Smith 29258 (HT: US;
 IT: ILL).
- poscitum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 279, fig.
 242. 1950. TYPE: Ecuador, Los Rios, near Quevedo, Cantón
 Vinces. Oct.-Nov. 1934. Mexia 6594 (HT: US 1619066; IT:
 ILL).
- positum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 213.
 1936. TYPE: Peru, Loreto, Portal, Río Huallaga. El. 135 m.
 5-11 Sep. 1929. Killip & Smith 29256 (HT: US; IT: ILL).
- <u>posusanum</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 213. 1936. TYPE: Peru, Huánuco, Pozuzo. El. 600 m. 20-22 June 1923. <u>Macbride</u> 4609 (HT: F 535686; IT: ILL).
- potamophilum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 231,
 fig. 197. 1950. TYPE: Colombia, Nariño, S end of Gorgona
 Island, near sea level. 9 Feb. 1939. Killip & García 33108
 (HT: US 1770099; IT: ILL).
- pothophyllum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 214. 1936. TYPE: Peru, Loreto, La Victoria on the Amazon.
 Aug.-Sep. 1929. Williams 2998 (HT: F 608343; IT: ILL).
- praeclarum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 214. 1936. TYPE: Peru, Junín, La Merced, Hacienda Schunke.
 E1. 1200 m. Aug.-Sep. 1923. Macbride 5623 (HT: F 536662;
 IT: ILL).

- praesagium Trel. & Yuncker, Piperaceae no. S. Amer. 1: 308, fig.
 273. 1950. TYPE: Colombia, Nariño, E side of Gorgona Island.
 El. 50-100 m. 11 Feb. 1939. Killip & García 33158 (HT: US
 1770140; IT: ILL; PT at ILL: Killip & García 33348).
- praeterlatum Trel., J. Wash. Acad. Sci. 19: 335. 1929. TYPE:
 Honduras, Atlantida, Lancetilla Valley near Tela. El. 100 m.
 11 Jan. 1928. Standley 54337 (HT: F 583571; IT: ILL).- [- P. aeruginosibaccum (fide Standley & Steyerm., 1952); P.
 jacquemontianum (cf. Burger, 1971)]
- prismaticum C.DC. var. villosulum Trel., Contr. U.S. Nat. Herb.
 26(4): 135. 1929. TYPE: Costa Rica, Limón. Feb. 1926.
 Standley & Valerio 48570 (HT: US 1307545; PT at ILL: Standley & Valerio 50971, 51234).-- [= P. augustum Rudge (cf. Burger, 1971)]
- procerum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 214. 1936. TYPE: Peru, Junin, La Merced, Schunke Hacienda.
 El. 1400-1700 m. 8-12 June 1929. Killip & Smith 24636 (HT: US; IT: ILL).
- prodigum Trel., J. Wash. Acad. Sci. 19: 335. 1929. TYPE:
 Honduras, Atlantida, Lancetilla Valley near Tela. El. 100 m.
 22 Jan. 1928. Standley 54916 (HT: F 582776; IT: ILL).-[= P. fraguanum (fide Standley & Steyerm., 1952); = P.
 sancti-felicis (fide Burger, 1971)]
- propinquum C.DC. var. brevistylum Trel. in Macbr., Field Mus.
 Publ. Bot. 13(No. 357): 215. 1936. TYPE: Peru, Huánuco,
 Cochero. Poeppig 1037 [HT: W; the specimen at ILL is Poeppig
 1337, obtained from W (that number cited with a "?"); it is
 either an IT or a PT].-- [= affin. P. crassinervium (cf.
 Yuncker, 1972)]
- propinquum var. grande Trel. in Macbr., Field Mus. Publ. Bot.
 13(No. 357): 215. 1936. TYPE: Peru, Loreto, Yurimaguas to
 Balsapuerto. El. 135-150 m. 26-31 Aug. 1929. Killip &
 Smith 28109 (HT: US; IT: ILL; PT at ILL: Killip & Smith
 27757, 28734).-- [= P. crassinervium (cf. Yuncker, 1972)]

- provulgatum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 277,
 fig. 239. 1950. TYPE: Colombia, Norte de Santander, Tapatá,
 Calugá Valley. El. 1500-2100 m. March 1927. Killip & Smith
 20478 (HT: US 1355516; IT: ILL).
- pseudoarboreum Yuncker, Bol. Inst. Bot. (São Paulo) 3: 113, fig. 99. 1966. TYPE: Brazil, Acre, near mouth of Río Macauhan. 8 Aug. 1933. Krukoff 5349 (HT: NY; IT: ILL; PT at ILL: Krukoff 5713).— [This species upheld by Yuncker, 1973]
- pseudo-callosum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 215. 1936. TYPE: Peru, Huánuco, Huacachi near Muña. El. 1950 m. May-June 1923. Macbride 4103 (HT: F 535172; IT: ILL; PT at ILL: Macbride 4333).
- <u>pseudoglabrescens</u> Trel. & Yuncker, Piperaceae no. S. Amer. 1: 228, fig. 193. 1950. TYPE: Venezuela, Bolívar, Río Paragua, Isla El Casabe. El. 265 m. 9 April 1943. <u>Killip 37312</u> (HT: US 1855431; IT: ILL).
- <u>pseudo-lanceaefolium</u> Trel., Contr. U.S. Nat. Herb. 26(4): 170.

 1929. TYPE: Costa Rica, La Palma. El. 1450 m. Sep. 1898.

 <u>Tonduz</u> 12665 (HT: US 798273; PT at ILL: <u>Maxon & Harvey</u> 8375;

 <u>Standley</u> 41822; <u>Standley</u> & <u>Valerio</u> 43481, 48046).-- [- P.

 <u>lanceaefolium</u> (cf. Burger, 1971)]
- <u>pseudo-matico</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 217. 1936. TYPE: Peru, Huánuco, Mito. El. 2700 m. 8-22 July 1922. <u>Macbride & Featherstone 1488</u> (HT: F 517987; IT: ILL; PT at ILL: <u>Killip & Smith 24460</u>; <u>Macbride 3327</u>).
- pseudo-mollicomum C.DC. in DC., Prodromus 16(1): 278. 1869.
 TYPE: Peru, Loreto, Mainas. Poeppig 2290 (HT: G-DC ?; IT: ILL).
- pseudopopayanense Trel. & Yuncker, Piperaceae no. S. Amer. 1:
 191, fig. 150. 1950. TYPE: Colombia, Cauca, highlands of
 Popayán. El. 1600-2000 m. Lehmann K310 (HT: US 1420258;
 PT at ILL: Ewan 16567; Haught 5290).
- pseudo-variabile Trel., Contr. U.S. Nat. Herb. 26(2): 23. 1927.
 TYPE: Panama, Colón, Loma de la Gloria, near Fato. Pittier
 3845 (HT: US 678920; PT at ILL: Standley 25179).-- [= P.
 grande (fide Yuncker, 1950)]
- pseudo-variabile var. collium Trel., Contr. U.S. Nat. Herb. 26(2): 24. 1927. TYPE: Panama, Prov. Panamá, along the Río Tapia. Standley 26130 (HT: US 1153478; PT at ILL: Standley 27191, 27555).-- [= P. grande (fide Yuncker, 1950)]

- pseudo-variabile var. pachypus Trel., Contr. U.S. Nat. Herb. 26(2): 24. 1927. TYPE: Panama, between Frijoles and Monte Lirio. El. 30 m. 18 Oct. 1922. Killip 12145 [HT: US 1167279; IT: ILL (2 sheets)].-- [-P. grande (fide Yuncker, 1950)]
- <u>pseudo-viridicaule</u> Trel. var. <u>nievecitanum</u> Trel. in Woodson & Schery, Ann. Mo. Bot. Gard. 27: 296. 1940. TYPE: Panama, Bocas del Toro, vicinity of Nievecita. Aug. 1938. <u>Woodson. Allen & Seibert</u> 1829 (HT: ILL).-- [= P. hispidum (fide Yuncker, 1950 and 1957); = P. <u>sancti-felicis</u> (fide Burger, 1971)]
- psilophyllum C.DC. forma longepedunculatum Yuncker, Lilloa 27:
 148, pl. 28. [1953] 1955. TYPE: Bolivia, without definite
 locality. Bang 2900 (HT: NY; PT at ILL: Cárdenas 1331; Tate
 639).
- psittacorum Endl., Prodromus Fl. Norf., 37. 1833. TYPE: Norfolk
 Island. Bauer (HT: W?; IT: ILL).
- puberulescens Trel. in Macbr., Field Mus. Publ. Bot. 13(No.
 357): 218. 1936. TYPE: Peru, Loreto, Yurimaguas. El. 135 m.
 Aug.-Sep. 1929. Killip & Smith 29057 (HT: US; IT: ILL).
- puberulibracteum C.DC. var. monticola Trel. & Yuncker,
 Piperaceae no. S. Amer. 1: 144, fig. 122. 1950. TYPE:
 Colombia, Santander, vicinity of Las Vegas. El. 2600-3000 m.
 Dec. 1926. Killip & Smith 15943 (HT: US 1351739; IT: ILL).
- puente-altoanum Trel. in Yuncker, Field Mus. Publ. Bot. 9: 280.
 1940. TYPE: Honduras, Atlántida, Puente Alto, on the
 railroad about 50 km E of La Ceiba. El. 240 m. 19 July
 1938. Yuncker, Koepper & Wagner 8549 (HT: ILL).-[= P. fraguanum (fide Standley & Steyerm., 1952); = P.
 sancti-felicis (fide Burger, 1971)]
- * pullibaccum Trel., J. Arnold Arb. 9: 149. 1928. TYPE: New Guinea, Papua, Vaitata River. 13 Feb. 1926. Brass 966 (LECTOTYPE designated herein: A; ILT: ILL).-- This species recognized by Chew, 1972]
 - pullispicum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 218. 1936. TYPE: Peru, Loreto, Pongo de Manseriche.
 El. 280 m. 26 Dec. 1931. Mexia 6352 (HT: UC; IT: ILL).
 - punctiunculatum Trel., Contr. U.S. Nat. Herb. 26(4): 180. 1929.
 TYPE: Costa Rica, Guanacaste, Tilarán. El. 600 m.
 Jan. 1926. Standley & Valerio 45712 (HT: US 1307393; PT at ILL: Standley & Valerio 44975, 45048).

- puraceanum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 205, fig.
 166. 1950. TYPE: Colombia, El Cauca, "Canaan", Mt. Puracé.
 El. 3100-3300 m. June 1922. Pennell & Killip 6585 (HT: US
 1142135; IT: ILL).
- purpusianum Trel., J. Wash. Acad. Sci. 16: 205. 1926. TYPE: Mexico, Chiapas, S. Sierra Madre, Hacienda Fenix. 1925. Purpus 196 (HT: US 1209376; IT: ILL).
- putumayoense Trel. & Yuncker, Piperaceae no. S. Amer. 1: 47,
 fig. 37. 1950. TYPE: Colombia, Putumayo, Río Putumayo,
 Puerto Ospina. El. 230 m. 14 Nov. 1940. Cuatrecasas 10561
 (HT: US 1799093; IT: ILL).
- * quentinii Trel. ex Stehlé, Bull. Soc. Bot. France 84: 410. 1938, nomen subnudum (as quentini); Candollea 8: 74. 1940. TYPE: Guadeloupe, Ravine Malanga. El. 750 m. 1 Jan. 1937.

 Quentin & Stehlé 1337 [LECTOTYPE designated herein: NY; probable ILT: ILL (the number on the specimen at ILL is 1737 but it was obtained from NY and is probably a duplicate of No. 1337. Howard annotated the sheet at ILL as HT and the sheet at NY as IT); PT at ILL: Martinique, Stehlé & Stehlé 3228, 3351, 3395].-- [= P. glabrescens (fide Howard, 1973)]
 - quillandanum [stet!] Trel. & Ekman in Feddes Repert. Spec. Nov.
 Regni Veg. 26: 341. 1929. TYPE: Haiti, La Hotte, Quillaud,
 Les Roseaux. El. 100 m. 26 June 1928. Ekman 10115 (HT:
 ILL; PT at ILL: Ekman 10679).
 - quimirianum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 219. 1936. TYPE: Peru, Junín, La Merced, E of Quimirí
 Bridge. El. 800-1300 m. 1-3 June 1929. Killip & Smith
 23904 (HT: US; IT: ILL).
- * quiriguanum Trel. in Standley, Field Mus. Publ. Bot. 10: 160.

 1931. Type locality: Honduras, "in wet thickets near Progreso, also along the coast of Guatemala." [No type cited but probable HT (or LECTOTYPE designated herein) at ILL-- the sheet marked "type" by Trelease: Honduras, Yoro, wet thicket near Progreso. El. 30 m. 24 Jan. 1928. Standley 54995].-[= P. patulum (fide Standley & Steyerm., 1952); = P. marginatum (cf. Burger, 1971)]
 - raizudoanum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 291, fig. 257. 1950. TYPE: Colombia, Santander, headwaters of Dorado Creek, 12 km S of Raizudo. El. ca 300 m. 6 May 1937. Haught 2191 (HT: US 1742421; IT: ILL; PT at ILL: Haught 1812).

- rasile Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 220.
 1936. TYPE: Peru, Junin, Puerto Bermúdez. El. 375 m. 14-17
 July 1929. Killip & Smith 26404 (HT: US; IT: ILL).
- ratisportanum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 220. 1936. TYPE: Peru, Loreto, Balsapuerto. El. 150-350 m. 28-30 Aug. 1929. Killip & Smith 28570 (HT: US; IT: ILL).
- recensitum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):

 220. 1936. TYPE: Peru, Loreto, Santa Rosa. El. 135 m.

 1-5 Sep. 1929. Killip & Smith 28810 (HT: US; IT: ILL).
- reciprocum Trel., Ciencia (Mexico) 2: 207. 1941. TYPE: Peru, Chanchamayo. 23 Oct. 1863. Isern 2310 (HT: MA; IT: ILL).
- recreoense Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):

 220. 1936. TYPE: Peru, Loreto, Recreo, Yurimaguas.

 El. 155-210 m. Oct.-Nov. 1929. Williams 3928 (HT: F 622942; IT: ILL).
- rectispicum Trel. in Rusby, Mem. N.Y. Bot. Gard. 7: 225. 1927.

 TYPE: Bolivia, Bopi River Valley. El. 3000 ft. Sep. 1921.

 Rusby 574 (HT: NY; IT: ILL).-- [= P. mapirense C.DC. (fide Yuncker, 1955)]
- reductipes Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 221. 1936. TYPE: Peru, Loreto, La Victoria on the Amazon
 River. Aug.-Sep. 1929. Williams 2700 (HT: F 617253; IT:
 ILL).
- reductipes var. amplum Trel. in Macbr., Field Mus. Publ. Bot.

 13(No. 357): 221. 1936. TYPE: Peru, Loreto, La Victoria on the Amazon River. Aug.-Sep. 1929. Williams 2971 (HT: F 608157; IT: ILL).
- reductipes var. stenostachys Trel. in Macbr., Field Mus. Publ.

 Bot. 13(No. 357): 221. 1936. TYPE: Peru, Loreto, La Victoria
 on the Amazon River. Aug.-Sep. 1929. Williams 2578 (HT: F
 617343; IT: ILL).
- regresivanum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 239, fig. 207. 1950. TYPE: Venezuela, Aragua...between Rancho Grande and Dos Riitos. El. 900 m. 19, 20 May 1943. Killip & Lasser 37759 (HT: US 1855733; IT: ILL).
- rematense Trel. in Standley, Field Mus. Publ. Bot. 17: 233.

 1937. TYPE: Guatemala, Petén, Lake Petén, Remate. 25 March
 1933. Lundell 2087 (HT: MICH; IT: ILL).-- [= P. martensianum
 (fide Standley & Steyerm., 1952)]

- resalutatum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):

 222. 1936. TYPE: Peru, Junfn, Pichis Trail, San Nicolás.
 El. 1100 m. 4, 5 July 1929. Killip & Smith 26024 (HT: US; IT: ILL).
- restio Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 222.

 1936. TYPE: Peru, Huánuco, Pozuzo. El. 600 m. 20-22 June
 1923. Macbride 4689 (HT: F 535763; IT: ILL).
- restrictum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 223. 1936. TYPE: Peru, Junín, Cahuapanas. El. 340 m. 20, 21 July 1929. Killip & Smith 26737 (HT: US; IT: ILL).
- * rhinostachyum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 224. 1936. TYPE not cited but almost certainly an inadvertent omission (specimens marked "Type" at US and ILL): Peru, Junin, La Merced. El. 700 m. May-June 1929. killip&smith 23461 (LECTOTYPE designated herein: US 1358149; ILT: ILL).
- * rhizocaule Trel., J. Arnold Arb. 9: 149. 1928. TYPE: New Guinea, Papua, Vaitata River, Kira. 9 March 1928. Brass 1115 (LECTOTYPE designated herein: A; ILT: ILL).-- [-P. versteegii C.DC. (fide Chew, 1972)]
- * rhodocarpum Trel., J. Arnold Arb. 9: 149. 1928. TYPE: New Guinea, Papua, U-Uma River. El. 150 m. 14 May 1926. Brass 1427 (LECTOTYPE designated herein: A; ILT: ILL).-- [= P. mestonii Bailey (fide Chew, 1972)]
 - riitosense Trel. & Yuncker, Piperaceae no. S. Amer. 1: 396, fig. 357. 1950. TYPE: Venezuela, Aragua, Parque Nacional, Dos Riitos. El. 600 m. 19, 20 May 1943. Killip & Lasser 37755 (HT: US 1855731; IT: ILL).
 - rinconense Trel. in Yuncker, Field Mus. Publ. Bot. 17: 353.

 1938. TYPE: Honduras, Comayagua, near El Rincon, ca 10 miles
 W of Siguatepeque. El. 1400-1500 m. 24 July 1936. Yuncker,
 Dawson & Youse 6052 (HT: ILL).
- * rio-chiadoense Trel. & Yuncker, Piperaceae no. S. Amer. 1: 229, fig. 194. 1950. TYPE: Colombia, Antioquia, Rio Chiado, 65 km S of Turbo. El. 60 m. 7 May 1945. Haught 4643 [HT, or LECTOTYPE designated herein: US 1709187 (= fig. 194); IT or ILT: US 1709186; PT at ILL: Cuatrecasas 17590].
 - riojanum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 224. 1936. TYPE: Peru, Amazonas, Rioja, Moyobamba.
 El. 2700-3300 m. Jan. 1930. Williams 7600 (HT: F 629721;
 IT: ILL).

- rio-marguanum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 330, fig. 298. 1950. TYPE: Colombia, Norte de Santander, in region of Sarare, Río Margua Valley. El. 2000 m. 7 Nov. 1941. Cuatrecasas 12847 (HT: US 1851044; IT: ILL).
- rio-nechianum Yuncker in Trel. & Yuncker, Piperaceae no. S.

 Amer. 1: 211, fig. 174. 1950. TYPE: Colombia, Antioquia, Dos
 Bocas, Río Nechi, near Pato. June 1944. Ewan 15827 (HT:
 ILL).
- rio-zulianum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 50, fig. 40. 1950. TYPE: Colombia, Norte de Santander, Río Zulia. 18 May 1941. Nicéforo 143 (HT: ILL).
- rivialbi Trel. & Yuncker, Piperaceae no. S. Amer. 1: 265, fig. 229. 1950. TYPE: Colombia, El Valle, Río Digua Valley, between La Elsa and Río Blanco. El. 825 m. April 1939. Killip 34723 (HT: US 1771521; IT: ILL).
- robleanum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 270, fig. 235. 1950. TYPE: Colombia, Santander, vicinity of El Roble. El. ca 1500 m. 16 Feb. 1927. Killip & Smith 19372 (HT: US 1354629; IT: ILL).
- rogaguanum Trel. in Rusby, Mem. N.Y. Bot. Gard. 7: 225. 1927.

 TYPE: Bolivia, pampas near Lake Rogagua. El. 1000 ft.
 7 Nov. 1921. Rusby 1689 (HT: NY; IT: ILL).-- [This species recognized by Yuncker, 1955]
- roseovenulosum Trel. in Yuncker, Field Mus. Publ. Bot. 17: 353.

 1938. TYPE: Honduras, Cortés, near Parál, shore of Lake
 Yojoa. El. 630 m. Yuncker 4873 (HT: ILL).
- rotundibaccum Trel., Contr. U.S. Nat. Herb. 26(4): 164. 1929.

 TYPE: Costa Rica, San José, Quebradillas, Santa María de
 Dota. El. 1800 m. 24 Dec. 1925. Standley 42902 [HT: US
 1307279; PT at ILL: Standley 41285 (identification
 doubtful)].-- [= P. carpinteranum (fide Burger, 1971)]
- rotundibaccum var. fraijanesanum Trel., Contr. U.S. Nat. Herb.
 26(4): 164. 1929. TYPE: Costa Rica, Alajuela, Fraijanes.
 El. 1600 m. 12, 13 Feb. 1926. Standley & Torres 47669 (HT:
 US 1307511; IT: ILL).-- [= P. carpinteranum (fide Burger,
 1971)]
- rotundistipulum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 408, fig. 370. 1950. TYPE: Colombia, Putumayo, Río Putumayo, Puerto Porvenir, etc. El. 250 m. 17 Nov. 1940. Cuatrecasas 10596 (HT: US 1798150; PT at ILL: Mexia 6951).

- <u>rubiginosum</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 224. 1936. TYPE: Peru, Junín, Puerto Yessup. El. 400 m.
 10-12 July 1929. Killip & Smith 26292 (HT: US; IT: ILL).
- <u>rubribaccum</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 225. 1936. TYPE: Peru, Huánuco, Pozuzo. El. 600 m. 20-22 June 1923. <u>Macbride</u> 4565 (HT: F 535642; IT: ILL).
- rubripes Trel. in Standley, Field Mus. Publ. Bot. 18: 358. 1937.

 TYPE: Costa Rica, Guanacaste, upper slopes of Cerro San José de Líbano. El. 500-960 m. 15 Feb. 1930. Dodge, Hanckel & Thomas 6382 (HT: GH; IT: ILL).-- [= P. aequale (cf. Burger, 1971)]
- rubrospadix Trel. in Standley, Field Mus. Publ. Bot. 18: 358.

 1937. TYPE: Costa Rica, Limon, Bonilla Lakes. El. 300430 m. 13 Dec. 1929. Dodge, Catt & Thomas 5718 (HT: GH; IT: ILL).-- [= P. glabrescens (fide Burger, 1971)]
- rugosifolium Trel., Contr. U.S. Nat. Herb. 26(4): 185. 1929.

 TYPE: Costa Rica, Cartago, Finca Las Concavas. El. 12001300 m. 7, 8 Dec. 1925. Standley 41533 (HT: US 1307251;
 IT: ILL; PT at ILL: Standley & Valerio 49441).-- [- P.
 perhispidum C.DC. (fide Burger, 1971)]
- rurrenbaqueanum Trel. in Rusby, Mem. N.Y. Bot. Gard. 7: 225.
 1927. TYPE: Bolivia, Rurrenbaque. El. 1000 ft. 4 Oct.
 1921. Rusby 836 (HT: NY; IT: ILL).-- [= P. buchtienii (fide Yuncker, 1955)]
- rusbyi C.DC. var. hirsutum Yuncker, Lilloa 27: 139. [1953] 1955. TYPE: Bolivia, La Paz, N. Yungas, outskirts of Coroica. El. 2000 m. 5 Dec. 1935. Mexia 7792 (HT: US 1778378; IT: ILL).
- <u>sabanillanum</u> Trel. in Feddes Repert. Spec. Nov. Regni Veg. 23: 6, 9. 1926. TYPE: Cuba, Pinar del Río, San Diego de Tapias to Sabanilla, Sierra de los Órganos. 3 April 1920. <u>Ekman</u> 10659 [?HT (or fragments of type): ILL].
- <u>sagax</u> Trel. in Yuncker, Field Mus. Publ. Bot. 9: 280. 1940.
 TYPE: Honduras, Yoro, Coyoles. 27 June 1938. <u>Yuncker</u>,
 Koepper & Wagner 8030 (HT: ILL).
- <u>salamancanum</u> Trel. in Woodson & Schery, Ann. Mo. Bot. Gard. 27: 296. 1940. TYPE: Panama, Canal Zone, vicinity of Salamanca Hydrographic Station, Río Pequeni. El. ca 80 m. July 1938. Woodson, Allen & Seibert 1590 (HT: ILL).-- [= P. pinoganense Trel. (fide Yuncker, 1950)]

- <u>salentoi</u> Trel. & Yuncker, Piperaceae no. S. Amer. 1: 241, fig. 209. 1950. TYPE: Colombia, Caldas, Cordillera Central, Rio Santa Rita, Salento. El. 1600-1800 m. 29 July 1922. Killip & Hazen 8962 (HT: PH; PT at ILL: Pennell 8940).
- <u>salentoi</u> var. <u>cajamarcanum</u> Trel. & Yuncker, Piperaceae no. S. Amer. 1: 241. 1950. TYPE: Colombia, Tolima, along Quindío Hwy. between Cajamarca and summit of divide. El. 2400 m. 27-28 March 1939. <u>Killip & Varela</u> 34530 (HT: US 1771364; IT: ILL).
- <u>salgaranum</u> Trel. ex Trel. & Yuncker, Piperaceae no. S. Amer. 1: 269, fig. 234. 1950. TYPE: Colombia, Antioquia, Salgar, vicinity of Medellín. 5 April 1928. <u>Toro 1066</u> (HT: NY; IT: ILL).
- salicinum Opiz in Presl, Rel. Haenke. 1: 150. 1825-1830. TYPE:
 Mariana Islands (Pacific Isl. Trust Territory, U.S.), leg.
 Haenke [said to be from Panama-- fide Index Kewensis] (HT: ?;
 fragments of type at ILL).
- <u>san-andresense</u> Trel. & Yuncker, Piperaceae no. S. Amer. 1: 240, fig. 208. 1950. TYPE: Colombia, Huila, Cordillera Oriental, below Gabinete in the ravine of the Abra de San Andrés. El. 1900-2100 m. 24 March 1940. <u>Cuatrecasas 8615</u> (HT: US 1796603; IT: ILL).
- san-cristobalanum Trel. in Standley, Field Mus. Publ. Bot. 18:
 359. 1937. TYPE: Costa Rica, San Cristobal Road.
 E1. 8000 ft. 27 May 1928. Stork 2205 (HT: ILL).-- [= P. euryphyllum (fide Burger, 1971)]
- sandaloense Trel. in Standley, Field Mus. Publ. Bot. 18: 359.
 1937. TYPE: Costa Rica, Puntarenas, Río Sandalo, Peninsula
 de Osa, at sea level. Dodge & Goerger 10076 (HT: MO; IT:
 ILL).-- [= P. nudifolium C.DC. (fide Burger, 1971)]
- <u>sangabrielanum</u> Trel. in Gleason, Bull. Torrey Bot. Club 58: 354.
 1931. TYPE: Brazil, Río Negro, San Gabriel. 15 Sep. 1928.
 <u>Tate s.n., Tyler-Duida Exped. 1002</u> (HT: NY; IT: ILL).-- [- P. sancarlosianum C.DC. (fide Yuncker, 1973)]
- <u>sanguineispicum Trel.</u> in Macbr., Field Mus. Publ. Bot. 13(No. 357): 226. 1936. TYPE: Peru, Loreto, Iquitos. El. 100 m. 3-11 Aug. 1929. <u>Killip & Smith 27135</u> (HT: US; IT: ILL).
- <u>san-joseanum</u> C.DC. var. <u>chiriquinum</u> Trel. in Woodson & Seibert, Ann. Mo. Bot. Gard. 25: 826. 1938. TYPE: Panama, Chiriqui, between Río Tabasará and Río Tinta. 11 Aug. 1937. <u>Woodson, Allen & Seibert 416</u> [HT: MO; fragment of type (one leaf) at ILL].-- [- P. marginatum (fide Yuncker, 1950 and 1957)]

- <u>san-joseanum</u> var. <u>kobense</u> Trel. in Woodson & Schery, Ann. Mo. Bot. Gard. 27: 297. 1940. TYPE: Panama, Canal Zone, Fort Kobe Road. 22 July 1938. <u>Woodson</u>, <u>Allen & Seibert 1423</u> (HT: ILL).-- [- P. marginatum (fide Yuncker, 1950 and 1957)]
- san-joseanum var. panamanum Trel. in Woodson and Schery, Ann.
 Mo. Bot. Gard. 27: 297. 1940. TYPE: Panama, Gorgona Beach.
 7 Aug. 1938. Woodson, Allen & Seibert 1690 (HT: ILL).-[= P. marginatum (fide Yuncker, 1950 and 1957)]
- san-joseanum var. remediosense Trel. in Woodson & Schery, Ann.
 Mo. Bot. Gard. 27: 297. 1940. TYPE: Panama, Chiriquí, Río
 Chiriquí to Remedios. El. 15-50 m. 11 July 1938. Woodson,
 Allen & Seibert 1191 (HT: ILL).-- [= P. marginatum (fide
 Yuncker, 1950 and 1957)]
- <u>san-joseanum</u> var. <u>tabogense</u> Trel. in Woodson & Schery, Ann. Mo. Bot. Gard. 27: 297. 1940. TYPE: Panama, Prov. Panamá, Isla Taboga. July 1938. <u>Woodson</u>, <u>Allen</u> & <u>Seibert</u> 1531 (HT: ILL).-- [= P. marginatum (fide Yuncker, 1950 and 1957)]
- <u>san-juananum</u> Trel. in Standley, Field Mus. Publ. Bot. 11: 147. 1936. TYPE: El Salvador, San Juan de Tepezones. 1929. <u>Calderón 2539</u> (HT: F 603261; IT: ILL).
- san-martinense Trel. & Yuncker, Piperaceae no. S. Amer. 1: 410,
 fig. 373. 1950. TYPE: Colombia, Santander, E. Cordillera, S
 slope of Mt. San Martín, near Charta. El. 2300-2500 m.
 10 Feb. 1927. Killip & Smith 19160 (HT: US 1354458; IT: ILL;
 PT at ILL: Killip & Smith 19181).
- <u>san-miguelense</u> Trel. & Yuncker, Piperaceae no. S. Amer. 1: 280, <u>fig. 243. 1950</u>. TYPE: Ecuador, San Miguel. 4 Nov. 1924. Stevens 204 (HT: ILL).
- <u>san-nicolasense</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 227. 1936. TYPE: Peru, Junín, Pichis Trail, San Nicolás. El. 1100 m. 4-5 July 1929. <u>Killip & Smith 26009</u> (HT: US; IT: ILL).
- <u>san-ramonense</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 227. 1936. TYPE: Peru, Junín, San Ramón. El. 1400-1700 m. 8-12 June 1929. <u>Killip & Smith 24585</u> (HT: US; IT: ILL).
- <u>san-roqueanum</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 227. 1936. TYPE: Peru, San Martín, San Roque. El. 1350-1500 m. Jan.-Feb. 1930. <u>Williams</u> 7402 (HT: F 623525; IT: ILL; PT at ILL: <u>Killip & Smith</u> 27306).

- * santa-ritanum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 227. 1936. TYPE: Peru, Cuzco, Santa Rita, Santa Ana Valley. El. 2300 m. Aug. 1927. Herrera 1551 (HT, or LECTOTYPE designated herein: ILL).
 - san-vicentense Trel. & Yuncker, Piperaceae no. S. Amer. 1: 19,
 fig. 7. 1950. TYPE: Colombia, Santander, E. Cordillera, W
 slope of Mt. San Vicente, near Charta. El. 2500-2700 m.
 9 Feb. 1927. Killip & Smith 18984 (HT: US 1354299; IT: ILL;
 PT at ILL: Killip & Smith 18314).
 - <u>sapoto-yacuense</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 228. 1936. TYPE: Peru, Loreto, Sapoto Yacu, Santa Rosa. El. 155-210 m. Oct.-Nov. 1929. Williams 4923 (HT: F 624945; IT: ILL; PT at ILL: Williams 5027).
 - <u>saramaccanum</u> Yuncker in Maguire & Collaborators, Bull. Torrey Bot. Club 75: 288. 1948. TYPE: Suriname, km. 3.5, vicinity Krappa Camp (2), Saramacca River headwaters. 3 Oct. 1944. Maguire 24887 (HT: NY; IT: ILL).-- [This species recognized by Trel. & Yuncker, 1950 and by Yuncker, 1957]
 - <u>sasaimanum</u> Yuncker in Trel. & Yuncker, Piperaceae no. S. Amer. 1: 123, fig. 98. 1950. TYPE: Colombia, Cundinamarca, Estación, Santana, above Sasaima. El. 1600-1700 m. 25-29 July 1945. <u>Dugand & Jaramillo 3860</u> (HT: US 1854010; PT at ILL: <u>García Barriga 11900</u>).
 - <u>satisfactum</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 228. 1936. TYPE: Peru, Junín, Puerto Yessup. El. 400 m. 10-12 July 1929. <u>Killip & Smith 26245</u> (HT: US; IT: ILL).
 - scabiosifolium Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 229. 1936. TYPE: Peru, Loreto, Puerta Arturo. El. 135 m. 24-25 Aug. 1929. Killip & Smith 27730 (HT: US; IT: ILL).
 - <u>scabrellum</u> Yuncker, Bol. Inst. Bot. (São Paulo) 3: 67, fig. 56.
 1966. TYPE: Brazil, São Paulo, Itapira. 16 May 1927.
 <u>Hoehne 20334</u> (cited as <u>Hoehne s.n.</u>) (HT: ILL).-- [This species upheld by Yuncker, 1972]
 - <u>scabricaule</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 229. 1936. TYPE: Peru, Junín, near Perené Bridge, Río Paucartambo. El. 700 m. 19 June 1929. <u>Killip & Smith</u> 25299 (HT: US; IT: ILL).
 - scabridulicaule Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 229. 1936. TYPE: Peru, Loreto, mouth of Río Santiago. 14 Nov. 1931. Mexia 6100 [HT: UC; probable IT (Mexia 6106-- marked "Type" by Trelease): ILL].

- <u>scabridulilimbum</u> Trel. & Yuncker, Piperaceae no. S. Amer. 1: 279, fig. 241. 1950. TYPE: Colombia, Santander, E. Cordillera, Río Suratá Valley, between Jaboncillo and Suratá. El. 1500-1800 m. 3 Jan. 1927. <u>Killip</u> & <u>Smith</u> 16465 (HT: CH; PT at ILL: Killip & Smith 16775).
- <u>scabriseptum</u> Trel., J. Wash. Acad. Sci. 19: 336. 1929. TYPE: Honduras, Atlántida, Lancetilla Valley near Tela. El. 100 m. 8 Dec. 1927. Standley 52681 (HT: F 582776; IT: ILL).
- <u>scabriseptum</u> var. <u>reductum</u> Trel. in Yuncker, Field Mus. Publ. Bot. 17: 353. 1938. TYPE: Honduras, Atlántida, Lancetilla Valley. El. 27 m. 27 July 1934. <u>Yuncker 4773</u> (HT: ILL).
- <u>scabrum Lam. var. kalacroixense Trel. in Feddes Repert. Spec.</u>
 Nov. Regni Veg. 23: 308. 1927. TYPE: Haiti, l'Artibonite, Kalacroix. El. 700 m. 11 Dec. 1925. <u>Leonard 7939</u> (HT: ILL).
- <u>scalariforme</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 230. 1936. TYPE: Peru, Loreto, Caballo-Cocha on the Amazon River. Williams 2057 (HT: F 613146; IT: ILL; PT at ILL: Killip & Smith 29882; Williams 2056).
- scalarispicum Trel. in Yuncker, Field Mus. Publ. Bot. 17: 353.
 1938. TYPE: Honduras, Comayagua, above El Achote, near
 Siguatepeque. El. 1800-2000 m. 28 July 1936. Yuncker,
 Dawson & Youse 6156 (HT: ILL).
- <u>scandenticaule</u> Yuncker, Bol. Inst. Bot. (São Paulo) 3: 68, fig. 57. 1966. TYPE: Brazil, Mato Grosso, Ponte de Pedra. April 1918. <u>Kuhlmann</u> 1954-K (HT: ILL).-- [This species upheld by Yuncker, 1972]
- scansum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 32, fig. 24.

 1950. TYPE: Colombia, Antioquia, N of Dabeiba, along road to
 Turbo. El. 300-350 m. 25 Feb. 1942. Metcalf & Cuatrecasas
 30183 (HT: ILL; PT at ILL: Haught 5453).
- schippianum Trel. ex Standley in Standley & Record, Field Mus. Publ. Bot. 12: 104. 1936 (without a Latin diagnosis); in Standley & Steyerm., Fieldiana Bot. 24(3): 323. 1952. TYPE: British Honduras (Belize): 19-mile, Stann Creek Railway. El. 90 m. Schipp 316 (HT: F; fragments of type at ILL).
- * scutaespicum Trel., Ciencia (Mexico) 2: 208. 1941. TYPE: Peru,
 Chanchamayo. 23 Oct. 1863. <u>Isern 2181-c</u> (HT, or LECTOTYPE designated herein: ILL).-- [= P. hispidum, fide Trel. & Yuncker annotation]

- <u>sebastianum</u> Yuncker, Bol. Inst. Bot. (São Paulo) 3: 69, fig. 58. 1966. TYPE: Brazil, São Paulo, Ilha São Sebastio. 5 Aug. 1895. <u>Loefgren 3063</u> (HT: SP; IT: ILL).-- [This species upheld by Yuncker, 1972]
- seminervosum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 53.
 1950. TYPE: Colombia, Antioquia, Peñares Blancas. 5 May
 1926. Juzepczuk 4702 (HT: LE; fragments of type at ILL).
- <u>seminitidulum</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 232. 1936. TYPE: Peru, Junin, La Merced. El. 600 m. Macbride 5289 (HT: F 536314; IT: ILL; PT at ILL: Killip & Smith 24093, 24964).
- <u>semiplenum</u> Trel., Ciencia (Mexico) 2: 208. 1941. TYPE: Peru, Chanchamayo. 23 Oct. 1863. <u>Isern</u> 2181-d (HT: MA; IT: ILL).
- semitarium Trel. & Yuncker, Piperaceae no. S. Amer. 1: 187, fig.
 146. 1950. TYPE: Colombia, Antioquia, Jericó. Dec. 1940.
 Daniel & Tomás 2732 (HT: US 1830391; IT: ILL).
- <u>sericeonervosum</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 233. 1936. TYPE: Peru, Loreto, La Victoria on the Amazon River. Aug.-Sep. 1929. <u>Williams</u> 2928 (HT: F 608548; IT: ILL).
- <u>serotinum</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 233. 1936. TYPE: Peru, Junin, Perené Bridge, Rio
 Paucartambo. El. 700 m. 19 June 1929. <u>Killip</u> & <u>Smith</u> 25344
 (HT: US; IT: ILL).
- <u>setosum</u> Trel. & Yuncker, Piperaceae no. S. Amer. 1: 38, fig. 29.
 1950. TYPE: Colombia, El Valle, Cordillera Occidental, "Calima", on Río Calima. 14-15 Sep. 1922. <u>Killip 11219</u> (HT: US 1143179; IT: ILL; PT at ILL: <u>Cuatrecasas</u> 15403).
- <u>setulosum Trel.</u> in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 234. 1936. TYPE: Peru, Loreto, Yurimaguas. El. 135 m.
 Aug.-Sep. 1929. Killip & Smith 27568 (HT: US; IT: ILL).
- <u>sibunense</u> Trel. ex Standley in Standley & Record, Field Mus.
 <u>Publ.</u> Bot. 12: 408. 1936. TYPE: British Honduras (Belize),
 Gracie Rock, Sibun River. 24 March 1935. <u>Gentle</u> 1562 (HT: MICH; IT: ILL).-- [= P. pseudoasperifolium C.DC. (fide Standley & Steyerm., 1952)]
- <u>sidipilum</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 234. 1936. TYPE: Peru, Junin, Rio Perené. El. 600 m. 16-18 June 1929. <u>Killip & Smith</u> 25160 (HT: US; IT: ILL).

- siguatepequense Trel. in Yuncker, Field Mus. Publ. Bot. 17: 354.
 1938. TYPE: Honduras, Comayagua, near Siguatepeque.
 El. 1050 m. 23 July 1936. Yuncker, Dawson & Youse 6042 (HT: ILL).
- <u>siguatepequense</u> var. <u>subrhombifolium</u> Trel. in Yuncker, Field Mus. Publ. Bot. 17: 354. 1938. TYPE: Honduras, Comayagua, vicinity of Siguatepeque. El. 1050 m. 3 July 1936. Yuncker, Dawson & Youse 5617 (HT: ILL).
- silencioi Trel. in Standley, Field Mus. Publ. Bot. 18: 360.

 1937. TYPE: Costa Rica, Guanacaste, El Silencio. El. 750 m.
 13 Jan. 1926. Standley & Valerio 44644 (HT: US; IT: ILL; PT at ILL: Standley & Valerio 44656, 45053).-- [- P. nudifolium (fide Burger, 1971)]
- silvanorum Trel., Contr. U.S. Nat. Herb. 26(4): 169. 1929.
 TYPE: Costa Rica, San José, Las Nubes. El. 1500-1900 m.
 21 March 1924. Standley 38500 (HT: US 1229454; PT at ILL:
 Standley & Valerio 51562, 52116, 52230).-- [= P. poasanum (fide Burger, 1971)]
- silvarum C.DC. var. minus Trel. & Yuncker, Piperaceae no. S. Amer. 1: 185, fig. 144. 1950. TYPE: Ecuador, Pichincha, Corazón. Sodiro 1/22 (HT: GH; PT at ILL: Sodiro s.n.).
- <u>silvigaudens</u> Yuncker, Bol. Inst. Bot. (São Paulo) 3: 15, fig. 12. 1966. TYPE: Brazil, Amazonas, Manáus. El. 25 m. 17 Oct. 1929. <u>Killip & Smith 30174</u> (HT: US 1463342; IT: ILL).-- [This species upheld by Yuncker, 1972]
- <u>silvioberrans</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 234. 1936. TYPE: Peru, Loreto, Yurimaguas to Balsapuerto. El. 135-150 m. 26-31 Aug. 1929. <u>Killip</u> & <u>Smith</u> 28119 (HT: US; IT: ILL).-- [= P. <u>subsilvestre</u> C.DC. (fide Yuncker, 1972)]
- sinuatifolium Trel., Contr. U.S. Nat. Herb. 26(4): 147. 1929.

 TYPE: Costa Rica, Guanacaste, Los Ayotes, near Tilarán.

 El. 600-700 m. 21 Jan. 1926. Standley & Valerio 45537 (HT: US 1307377; IT: ILL).-- [= P. terrabanum (fide Burger, 1971)]
- sinuclausum Trel. in Macbr., Field Mus. Publ. 13(No. 357): 235. 1936. TYPE: Peru, Huánuco, María del Valle. El. 2100 m. 30 April 1930. Macbride 3564 (HT: F 534640; IT: ILL; PT at ILL: Herrera 2007).

- sinuosirameum Trel., Trab. Mus. Nac. Ci. Nat. Ser. Bot. 33: 50. 1936 (without a Latin diagnosis). TYPE: Colombia, Cundinamarca, La Esperanza. El. ± 1500 m. 16 April 1932. Cuatrecasas 2420(a) (HT: ILL).-- [-P. holtonii var. cundinamarcanum (fide Trel. & Yuncker, 1950)]
- sipenanum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 225, fig. 188. 1950. TYPE: Colombia, Putumayo, Río San Miguel, Quebrada de Sipenae. El. 400 m. 12 Dec. 1940. <u>Cuatrecasas</u> 10996 (HT: US 1799103; IT: ILL).
- siquirresense Trel. in Standley, Field Mus. Publ. Bot. 18: 361.
 1937. TYPE: Costa Rica, Siquirres. 28 May 1928. Stork 2251
 [HT: ILL; IT: ILL (2 sheets)].-- [= P. jacquemontianum (fide Burger, 1971)]
- sociorum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 225, fig. 189. 1950. TYPE: Colombia, Chocó, Bahía Solano, along Quebrada Jellita. El. 50-100 m. 22 Feb. 1939. Killip & García 33518 (HT: US 1770452; IT: ILL).
- <u>soledadense</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 235. 1936. TYPE: Peru, Loreto, Soledad, Río Itaya. El.
 110 m. 20-22 Sep. <u>Killip & Smith 29769</u> (HT: US; IT: ILL; PT at ILL: Killip & Smith 27101, 27134, 28107, 29598, 29711).
- soledadense var. angustum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 236. 1936. TYPE: Peru, Loreto, San Antonio, Río Itaya. El. 110 m. 18 Sep. 1929. Killip & Smith 29350 (HT: US; IT: ILL).
- * sonsonatense Trel. ex Standley & Calderón, Lista prelim. pl. El Salvador, 61. 1925, nomen subnudum. Type locality: El Salvador, Sonsonate, Nahulingo. Standley 22028 (specimen marked as "Type" by Trelease at ILL = LECTOTYPE designated herein).
 - soricicaudatum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 236. 1936. TYPE: Peru, Junín, Puerto Bermúdez. El. 375 m. 14-17 July 1929. Killip & Smith 26661 (HT: US; IT: ILL).
 - speratum Trel., J. Wash. Acad. Sci. 19: 336. 1929. TYPE:
 Honduras, Atlantida, Tela, at sea level. 27 Jan. 1928.
 Standley 55184 (HT: F 583272; IT: ILL).-- [= P. fraguanum (fide Standley & Steyerm., 1952)]
 - spoliatum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 118, fig. 92. 1950. TYPE: Colombia, Nariño, E side of Gorgona Island. El. 50-100 m. 11 Feb. 1939. Killip & García 33168 (HT: US 1770147; IT: ILL).

- <u>standleyi</u> Trel. in Standley, J. Wash. Acad. Sci. 13: 366. 1923.
 <u>TYPE:</u> El Salvador, Volcán de San Salvador. El. 1800 m.
 7 April 1922. <u>Standley 22894</u> (HT: ILL).-- [This species recognized by Standley & Steyerm., 1952]
- stehleorum Trel. ex Stehlé, Fl. Descr. Antill. Fr. 2(1): 100.
 1940; Bull. Agric. Martinique 9(3): 177, tab. 6. 1940. TYPE:
 Martinique, "Gorges Se la Falaise." El. 750 m. 24 May 1939.
 Stehlé & Stehlé 3257 (HT and IT: ILL; PT at ILL: Stehlé &
 Stehlé 3209, 3240, 3244).-- [= P. aduncum (fide Howard,
 1973)]
- <u>stevensi</u> Trel., Contr. U.S. Nat. Herb. 26(2): 27. 1927. TYPE:
 Panama, Canal Zone, Frijoles. 14 Oct. 1924. <u>Stevens 1247</u>
 (HT: ILL).-- [This species recognized by Yuncker, 1950]
- <u>stevensi</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 237. 1936, <u>non</u> Trel. (1927). TYPE: Peru, Junín, Huacapistana. 6 Dec. 1924. <u>Stevens 85</u> (HT: ILL).--[Originally labelled <u>P</u>. <u>elongatum</u>-- probably the correct disposition]
- <u>stillans Trel.</u> & Standley in Standley & Steyerm., Fieldiana Bot. 24(3): 325. 1952. TYPE: Guatemala, Quiché, Cerro Putul, Zona Reina. El. 1200 m. 3 Dec. 1934. <u>Skutch</u> 1822 (HT: F; IT: ILL).
- striatinervosum Trel. in Macbr., Field Mus. Publ. Bot. 13(No.
 357): 237. 1936. TYPE: Peru, Loreto, Puerto Arturo.
 El. 135 m. 24-25 Aug. 1929. Killip & Smith 27910 (HT: US;
 IT: ILL).
- <u>strigillosicaule</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 237. 1936. TYPE: Peru, Loreto, Yurimaguas. El. 135 m. Aug.-Sep. 1929. <u>Killip & Smith 27615</u> (HT: US; IT: ILL).
- <u>strigillosum</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 238. 1936. TYPE: Peru, Loreto, Puerto Arturo. El. 135 m. 24-25 Aug. 1929. Killip & Smith 27813 (HT: US; IT: ILL).
- <u>strigosum</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 238. 1936. TYPE: Peru, Loreto, Balsapuerto. El. 350-550 m. 29 Aug. 1929. Killip & Smith 28538 (HT: US; IT: ILL).
- <u>stuebelii</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 238. 1936. TYPE: Peru, Loreto(?), Rio Huallaga. <u>Stuebel</u> 68 (HT: B; PT at ILL: Williams 7056).

- <u>subaequilaterum</u> Trel. in Yuncker, Field Mus. Publ. Bot. 9: 280.
 1940. TYPE: Honduras, Atlántida, Roma siding, about 25 km E of La Ceiba. 21 July 1938. <u>Yuncker</u>, <u>Koepper & Wagner 8565</u> (HT: ILL).-- [= P. <u>atlantidanum</u> (fide Standley & Steyerm., 1952); = P. pseudo-fuligineum (cf. Burger, 1971)]
- <u>subcinereum</u> C.DC. var. <u>perhirsutum</u> Yuncker, Bol. Inst. Bot. (São Paulo) 3: 71, fig. 61. 1966. TYPE: Brazil, Minas Gerais, Mun. de Belo Horizonte, etc. 26 July 1942. <u>Magalhães 3224</u> (HT: US 2124365; PT at ILL: <u>Loefgren 800</u>).-- [This variety upheld by Yuncker, 1972]
- <u>subcordulatum</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 239. 1936. TYPE: Peru, Loreto, Soledad, Río Itaya. El. 110 m. 20-22 Sep. 1929. Killip & Smith 29794 (HT: US; IT: ILL).
- subdilatatum Trel., Contr. U.S. Nat. Herb. 26(2): 35. 1927.

 TYPE: Panama, Prov. Panamá, Taboga Island. 31 Oct. 1917.

 Killip 3194 (HT: US 863177; IT: ILL).-- [= P. taboganum (fide Yuncker, 1950 and annotation; = P. pseudo-fuligineum (cf. Burger, 1971)]
- <u>subflavum C.DC. var. longipedunculatum</u> Trel. & Yuncker,
 Piperaceae no. S. Amer. 1: 313. 1950. TYPE: Colombia, Cauca Valley, Popayán, Ríoblanco. El. 1800 m. 9 July 1939.
 <u>Arbeláez & Cuatrecasas 5796</u> (HT: US 1774257; PT at ILL: Killip 7188).
- <u>subpatens</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 240. 1936. TYPE: Peru, Huánuco, Pozuzo. El. 600 m. 20-22 June 1923. <u>Macbride 4633</u> (HT: F 535708; IT: ILL).
- <u>subpedale</u> Trel. & Yuncker, Piperaceae no. S. Amer. 1: 53, fig. 43. 1950. TYPE: Colombia, Chocó, Andagoya. El. 70-100 m. 20-30 April 1939. <u>Killip 35058</u> (HT: US 1771813; IT: ILL).
- <u>subpuberulum</u> Trel. in Feddes Repert. Spec. Nov. Regni Veg. 23: 4, 7. 1926. TYPE: Cuba, Pinar del Río, Río San Miguel. <u>Wilson 9291</u>. [HT: ?; PT at ILL: <u>Ekman 13869</u> (2 sheets), <u>17328</u> (2 sheets), <u>17486</u>].
- <u>subrepens</u> Trel. in Woodson & Seibert, Ann. Mo. Bot. Gard. 24: 187. 1937. TYPE: Panama, Coclé, western slope and summit of Cerro Valle Chiquito. El. 700-800 m. 25 July 1935. <u>Seibert</u> 504 (HT: MO; IT: ILL).-- [This species upheld by Yuncker, 1950]

- <u>subscabridum C.DC.</u>, Notizbl. Bot. Gart. Berlin-Dahlem 6: 455.
 1917. TYPE: Brazil, Paraná, Serra do Mar, Ypiranga in silva primaeva. <u>Dusen 3626</u> (HT: S; IT: ILL).-- [= P. <u>dilatatum</u> (fide Yuncker, 1972)]
- <u>subsessile</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 240. 1936. TYPE: Peru, Loreto, Santa Rosa. El. 135 m.
 1-5 Sep. 1929. <u>Killip & Smith 28747</u> (HT: US; IT: ILL; PT at ILL: Killip & Smith 28031, 28818; Williams 3921, 3971).
- <u>subtextum</u> Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 241. 1936. TYPE: Peru, Junín, Puerto Yessup. El. 400 m.
 10-12 July 1929. <u>Killip & Smith</u> 26265 (HT: US; IT: ILL; PT at ILL: Killip & Smith 26278).
- <u>subtomentosum</u> Trel. & Yuncker, Piperaceae no. S. Amer. 1: 154, fig. 132. 1950. TYPE: Colombia, Santander, Río Suratá Valley, above Suratá. El. 2000-2300 m. Jan. 1927. <u>Killip</u> & Smith 16592 (HT: US 1352317; IT: ILL).
- subtrinerve Trel., Contr. U.S. Nat. Herb. 26(2): 29. 1927.

 TYPE: Panama, Taboga Island. Pittier 3618 (HT: US 678676;
 PT at ILL: Piper 5410; Standley 26563).-- [= P.
 hirtellipetiolum var. subtrinerve (Trel.) Yuncker (fide
 Yuncker annotation, but comb. ined.; = var. harveyanum (fide
 Yuncker, 1950)-- see next entry]
- subtrinerve Trel. var. harveyanum Trel., Contr. U.S. Nat. Herb.
 26(2): 30. 1927. TYPE: Panama, Prov. Panamá, along the Tapia
 River. June 1923. Maxon & Harvey 6684 (HT: US 1180427; IT:
 ILL; PT at ILL: Maxon & Harvey 6734).-- [= P.
 hirtellipetiolum var. harveyanum (Trel.) Yuncker, 1950)]
- <u>subvariabile</u> Trel., Contr. U.S. Nat. Herb. 26(4): 145. 1929.
 <u>TYPE: Costa Rica, Guanacaste, near Tilarán.</u> El. 500-650 m.
 Jan. 1926. <u>Standley & Valerio 44970</u> (HT: US 1307334; IT: ILL; PT at ILL: <u>Standley & Valerio 44294</u>).-- [= <u>P. grande</u> (fide Burger, 1971)]
- * <u>sumideranum Trel. in Feddes Repert. Spec. Nov. Regni Veg. 23: 5, 9. 1926. TYPE: Cuba, Pinar del Río, base of Sierra San Francisco, between Hoyo Colorado and Francisco, Sumidero. 25 Nov. 1923. <u>Ekman 18211</u> (HT, or LECTOTYPE designated herein: ILL).</u>
 - supernum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 192, fig. 151. 1950. TYPE: Ecuador, Los Rios, Cantón Vinces, Hacienda Santa Lucía. El. 50 m. 18 Oct. 1934. Mexia 6561 (HT: US 1619065; IT: ILL).

- <u>suratanum</u> Trel. & Yuncker, Piperaceae no. S. Amer. 1: 210, fig. 172. 1950. TYPE: Colombia, Santander, Río Suratá Valley, above Suratá. El. 2000-2300 m. 5-6 Jan. 1927. Killip & Smith 16660 (HT: US 1352380; IT: ILL).
- surubresanum Trel., Contr. U.S. Nat. Herb. 26(4): 148. 1929.

 TYPE: Costa Rica, San Mateo, along Rio Surubres. 14 Feb.
 1909. Biolley 17353 (HT: US 861103; PT at ILL: Standley & Valerio 46111).-- [- P. chrysostachyum (fide Burger, 1971)]
- svidaefolium Trel. in Rusby, Mem. N.Y. Bot. Gard. 7: 225. 1927.

 TYPE: Bolivia, pampas near Lake Rogagua. El. 1000 ft.
 7 Nov. 1921. Rusby 1687 (HT: NY; IT: ILL).-- [= P.
 subsilvulanum C.DC. (fide Yuncker, 1955)]
- tabanicidum Trel., Contr. U.S. Nat. Herb. 26(4): 162. 1929.

 TYPE: Costa Rica, Guanacaste, Tilarán. El. 600 m.

 Jan. 1926. Standley & Valerio 45676 (HT: US 1307383; PT at ILL: Standley & Valerio 44241, 44896, 44925, 46593).-- [- P. jacquemontianum (cf. Burger, 1971)]
- <u>tabasaranum</u> Trel. in Woodson & Seibert, Ann. Mo. Bot. Gard. 25: 827. 1938. TYPE: Panama, Chiriquí, banks of lower Río Tabasará. 12 Aug. 1937. <u>Woodson</u>, <u>Allen</u> & <u>Seibert</u> 440 (HT: MO; IT: ILL).-- [= <u>P. pinoganense</u> (fide Yuncker, 1950)]
- tabernillanum Trel. var. anconense Trel. in Woodson & Schery,
 Ann. Mo. Bot. Gard. 27: 298. 1940. TYPE: Panama, Canal Zone,
 western slope of Ancón Hill. 20 July 1938. Woodson, Allen &
 Seibert 1327 (HT: ILL).-- [= P. taboganum (fide Yuncker,
 1950); = P. pseudo-fuligineum (cf. Burger, 1971)]
- tachiranum Yuncker in Trel. & Yuncker, Piperaceae no. S. Amer.

 1: 298, fig. 263. 1950. TYPE: Venezuela, Táchira, wooded quebrada in Montana of Río Táchira at base of Páramo de Tamá, between Betania and Tamá, etc. El. 2430 m. 13 July 1944.

 Steyermark 57172 (HT: F 1222766; IT: ILL).
- taperanum Yuncker, Bol. Inst. Bot. (São Paulo) 3: 126, fig. 110.

 1966. TYPE: Brazil, Pernambuco, Tapera. 5 March 1936.

 Pickel 4120 (HT: US 1593612; IT: ILL).-- [This species upheld by Yuncker, 1973]
- tapianum Trel., Contr. U.S. Nat. Herb. 26(2): 30. 1927. TYPE:
 Panama, Prov. Panamá, along the Tapia River, Juan Diaz
 region. June 1923. Maxon & Harvey 6709 (HT: US 1180449; IT:
 ILL; PT at ILL: Standley 26122).-- [= P. hirtellipetiolum
 var. tapianum (Trel.) Yuncker, 1950]

- tardans Trel. in Woodson & Schery, Ann. Mo. Bot. Gard. 27: 298.

 1940. TYPE: Panama, Chiriquí, vicinity of Casita Alta,
 Volcán de Chiriquí. El. 1500-2000 m. 1938. Woodson, Allen
 & Seibert 848 (HT: ILL).-- [= P. obliquum Ruiz & Pavón (fide Burger, 1971)]
- tardum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 242.
 1936. TYPE: Peru, Junin, Colonia Perené. El. 680 m.
 14-25 June 1929. Killip & Smith 25025 (HT: US; IT: ILL).
- Venezolana, 177. 1942 (nomen subnudum). TYPE: Venezuela, El Temblador, Bajo Caura. El. 100 m. 20 March 1939. Williams

 11551 (HT: US; IT: ILL).-- [= P. taboganum (fide Trel. & Yuncker, 1950; Yuncker, 1950)]
- tenebricosum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):

 242. 1936. TYPE: Peru, Loreto, Fortaleza, lower Río
 Huallaga. El. 155-210 m. Oct.-Nov. 1929. Williams 4201

 (HT: F 623585; IT: ILL).
- tenuiculispicum Trel. in Yuncker, Field Mus. Publ. Bot. 17: 354.

 1938. TYPE: Honduras, Atlántida, bank of Tela River above
 Lancetilla Valley. El. 27 m. 10 July 1934. Yuncker 4509
 (HT: ILL).
- tenuispicum C.DC., Bot. Gaz. 70: 170. 1920.-- Several syntypes, probably to be lectotypified: Costa Rica, Las Vueltas.

 Pittier 13187; Juan Vinas, Reventazon Valley. Cook & Doyle 294, 295 [Probable ST (from LE) at ILL: Tonduz 13187]

 [= Pittier 13187?)].-- [= P. aequale (cf. Burger, 1971)]
- tepezontesense Trel. in Standley, Field Mus. Publ. Bot. 11: 148.

 1936. TYPE: El Salvador, San Juan Tepezontes. 1929.

 Calderón 2543 (HT: F 603259; IT: ILL; PT at ILL: Calderón 2541).
- terronesense Trel. in Standley, Field Mus. Publ. Bot. 18: 365.

 1937. TYPE: Costa Rica, Puntarenas, mouth of Río Terrones.

 28 April 1930. Dodge 7749 (HT: GH; IT: ILL).-- [= P. nudifolium (fide Burger, 1971)]
- tessaraespicum Trel. in Yuncker, Field Mus. Publ. Bot. 17: 354.

 1938. TYPE: Honduras, Comayagua, near Siguatepeque.

 El. 1050 m. 5 July 1936. Yuncker, Dawson & Youse 5662 (HT:
 ILL).-- [= P. fraguanum (fide Standley & Steyerm., 1952);

 P. sancti-felicis (fide Burger, 1971)]
- thebaudianum Trel. in Feddes Repert. Spec. Nov. Regni Veg. 23: 309, 312. 1927. TYPE: Haiti, Massif de La Selle, Rivière Thébaud. El. 1000-1100 m. Ekman 1924 (HT: ILL).

- tikalense Trel. in Standley, Field Mus. Publ. Bot. 17: 234.

 1937. TYPE: Guatemala, Petén, in forest at Tikal.

 12-15 April 1931. Bartlett 12595 (HT: ILL).-- [= P. cayoense (fide Standley & Steyerm., 1952)]
- tilaranum Trel., Contr. U.S. Nat. Herb. 26(4): 131. 1929. TYPE:

 Costa Rica, Guanacaste, near Tilarán. El. 500-650 m.

 Jan. 1926. Standley & Valerio 46596 (HT: US 1307464; PT at

 ILL: Standley & Valerio 44182, 44247).-- [- P. amalago (fide Burger, 1971)]
- timothianum A.C. Smith, Sargentia 1: 10. 1942. TYPE: Fiji, Mba
 Prov., Viti Levu, Nandarivatu. 22 Nov. 1940. Degener &
 Ordonez 13570 (HT: ?; IT: ILL).-- [= Macropiper timothianum
 (A.C. Smith) A.C. Smith (fide Smith, 1981)]
- tingens Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 244.

 1936. TYPE: Peru, Loreto, Yurimaguas. El. 180 m. 24 Oct.

 1931. Mexia 6072 (HT: UC; IT: ILL).
- tomas-albertoi Trel. & Yuncker, Piperaceae no. S. Amer. 1: 113,
 fig. 86. 1950. TYPE: Colombia, Antioquia, El Prado. 7 July
 1943. Daniel 3022 [HT: US 1834580; IT: ILL; PT at ILL (2
 sheets): Tomás Alberto 1577].
- tomasi Trel. ex Tomás Alberto, Colegio de San José, Medellín, Colombia Publ. No. 53-70, 18. 1942 (nomen nudum); ex Trel. & Yuncker, Piperaceae no. S. Amer. 1: 252. 1950, pro syn. TYPE: Colombia, Antioquia, Yarumal. March 1941. Tomás Alberto 1533 (HT: ILL).-- [= P. eriopodon (Miq.) C.DC. in DC. (fide Trel. & Yuncker, 1950)]
- tonduzii C.DC. var. semiherbaceum Trel., Contr. U.S. Nat. Herb. 26(4): 143. 1929. TYPE: Costa Rica, Guanacaste, Quebrada Serena near Tilarán. El. 700 m. 27 Jan. 1926. Standley & Valerio 46261 (HT: US 1307443; PT at ILL: Standley & Valerio 44751).-- [= P. tonduzii (fide Burger, 1971)]
- tonoroanum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 328, fig. 295. 1950. TYPE: Venezuela, Bolívar, Sitio Tonoro, Río Tonoro, etc. 26 Dec. 1943. Cardona 454 (HT: US 1878526; IT: ILL).
- torbecanum Trel. in Feddes Repert. Spec. Nov. Regni Veg. 23:
 306, 310. 1927. TYPE: Haiti, La Mare Proux, Torbec.
 El. 1350 m. Ekman 5279 (HT: ILL).

- tortuosipilum Trel., Contr. U.S. Nat. Herb. 26(4): 148. 1929.

 TYPE: Costa Rica, Cartago, El Muñeco. El. 1400-1500 m.

 March 1926. Standley & Valerio 51026 (HT: US 1307618; PT at ILL: Standley & Valerio 50973, 51017).-- [- P. biauritum (cf. Burger, 1971)]
- tortuosivenosum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 244. 1936. TYPE: Peru, Loreto, mouth of Río Santiago. El. 210 m. 2 Dec. 1931. Mexia 6199 [HT: UC; IT: ILL (2 sheets)].
- tractifolium Trel., Contr. U.S. Nat. Herb. 26(4): 166. 1929.

 TYPE: Costa Rica, Heredia, above San Isidro, Cerro de las Caricias. El. 2200 m. 11 March 1926. Standley & Valerio 52052 (HT: US 1307663; PT at ILL: Standley & Valerio 49122, 51945).-- [= P. tenuimucronatum C.DC. (cf. Burger, 1971)]
- transpontinum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 244. 1936. TYPE: Peru, Junín, Perené Bridge, Paucartambo Valley. El. 700 m. 19 June 1929. Killip & Smith 25352 (HT: US; IT: ILL; PT at ILL: Killip & Smith 25273).
- transpontinum var. ecordulatum Trel. in Macbr., Field Mus. Publ.

 Bot. 13(No. 357): 245. 1936. TYPE: Peru, Junín, Colonia

 Perené. El. 680 m. 14-25 June 1929. Killip & Smith 25055

 (HT: US; IT: ILL).
- trichostylopse Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 245. 1936. TYPE: Peru, Huánuco, Pozuzo. El. 600 m. 20-22 June 1923. Macbride 4646 (HT: F 535721; IT: ILL; PT at ILL: Macbride 4664, 5336).
- trichostylopse var. latum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 245. 1936. TYPE: Peru, Huánuco, Cushi. El. 1500 m. 19-23 June 1923. Macbride 4849 (HT: F 535889; IT: ILL).
- trigonocarpum Trel. in Feddes Repert. Spec. Nov. Regni Veg. 24: 363. 1928. TYPE: Santo Domingo, Las Lagunas, Azua. Ekman 6376 (HT: ILL).
- triquetrobaccum Trel., Trab. Mus. Nac. Ci. Nat. Ser. Bot. 33:
 51. 1936 (without a Latin diagnosis). TYPE: Colombia,
 Tolima, Ibagué. El. 1300 m. 10 May 1932. Cuatrecasas 2418
 (HT: ILL).-- [= P. cumanense (fide Trel. & Yuncker, 1950)]
- triquetrobaccum var. tenuifolium Trel., Trab. Mus. Nac. Ci. Nat. Ser. Bot. 33: 51. 1936 (without a Latin diagnosis). TYPE:
 Colombia, Tolima, Ibagué. 8 May 1935. Cuatrecasas 2417 (HT: ILL).-- [= P. cumanense (fide Trel. & Yuncker, 1950)]

- triquetrofructum Trel. in Standley, Field Mus. Publ. Bot. 18:

 366. 1937. TYPE: Costa Rica, Cartago, Río Pejivalle Gorge.
 El. 600-650 m. 27 Sep. 1929. Dodge & Thomas 4431 (HT: GH;
 IT: ILL).-- [= P. dilatatum (cf. Burger, 1971)]
- tristigmum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 246. 1936. TYPE: Peru, Loreto, Caballo-Cocha on the Amazon
 River. Aug. 1929. Williams 2029 (HT: F 613314; IT: ILL).
- triumphale Trel. in Standley, Field Mus. Publ. Bot. 10: 161.

 1931. Type locality: Honduras, "in thickets along the beach near Tela, Lancetilla Valley." No type cited; perhaps lectotypification needed (authentic specimen from type locality at ILL: Standley 53035).
- tuberculatum Jacq. var. cangrejalense Trel. in Yuncker, Field

 Mus. Publ. Bot. 9: 280. 1940. TYPE: Honduras, Atlántida, in
 thicket on lower slopes of Mt. Cangrejal. 5 July 1938.

 Yuncker, Koepper & Wagner 8204 (HT: ILL).
- tuberculatum var. scandens Trel. & Yuncker, Piperaceae no. S.

 Amer. 1: 367. 1950. TYPE: Colombia, Boyacá, San Pablo.
 El. 150 m. 21 Feb. 1939. Haught 2620 (HT: US 1707193; IT: ILL).
- tumidicondyli Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 247. 1936. TYPE: Peru, Loreto, Iquitos, Rancho Indiano. El. 110 m. 25 Jan. 1932. Mexia 6431 (HT: UC; IT: ILL).
- tumidipedunculum Trel. in Yuncker, Field Mus. Publ. Bot. 9: 281.

 1940. TYPE: Honduras, Yoro, Las Flores, near Coyoles.
 El. 300 m. 30 June 1938. Yuncker, Koepper & Wagner 8151
 (HT: ILL).
- ulceratum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 247. 1936. TYPE: Peru, San Martín, San Roque. El. 1350-1500 m. Jan.-Feb. 1930. Williams 6962 (HT: F 622978; IT: ILL).
- ulceratum var. angustifolium Trel. in Macbr., Field Mus. Publ.

 Bot. 13(No. 357): 248. 1936. TYPE: Peru, San Martín, San
 Roque. El. 1350-1500 m. Jan.-Feb. 1930. Williams 6982 (HT: F 629612; IT: ILL).
- uncatum Trel. in Standley, J. Wash. Acad. Sci. 13: 367. 1923.

 TYPE: El Salvador, San Salvador, vicinity of Tonacatepeque.
 30 Dec. 1921. Standley 19435 (HT: ILL).

- unguiculatum Ruiz & Pavón, Fl. Peruv. Chil. 1: 34, pl. 57, fig. b. 1798. TYPE: Peru, Pozuzo and Chinchao. Ruiz & Pavón s.n. (HT: MA; fragments of type at ILL).-- [This species discussed by Howard, 1973]
- unguiculiferum Trel., Contr. U.S. Nat. Herb. 26(4): 149. 1929.

 TYPE: Costa Rica, Cartago, Pejivalle. El. 900 m. 7-8 Feb.
 1926. Standley & Valerio 47003 (HT: US 1307485; IT: ILL).-[= P. xanthostachyum (fide Burger, 1971)]
- vanderveldeanum Trel. in Feddes Repert. Spec. Nov. Regni Veg.

 23: 308, 312. 1927. TYPE: Haiti, La Hotte, Camp Perrin,

 Morne Vandervelde. El. 900 m. 2 Dec. 1925. Ekman 5224 (HT:
 ILL).
- variabile C.DC. var. obtentum Trel. in Yuncker, Field Mus. Publ. Bot. 9: 281. 1940. TYPE: Honduras, Atlantida, Mt. Cangrejal. El. 150 m. Yuncker, Koepper & Wagner 8495 (HT: ILL).
- varium Trel. in Woodson & Schery, Ann. Mo. Bot. Gard. 27: 299.
 1940. TYPE: Panama, Chiriquí, trail from Paso Ancho to Monte
 Lirio. El. 1500-2000 m. 16 Jan. 1939. Allen 1491 (HT:
 ILL).-- [= P. maxonii C.DC. var. varium (Trel.) Yuncker (fide
 Yuncker, 1950 and Burger, 1971)]
- velutininervosum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 249. 1936. TYPE: Peru, Junin, E of Quimiri Bridge, La Merced. El. 800-1300 m. 1-3 June 1929. Killip & Smith 24006 (HT: US; IT: ILL).
- * venturii Trel. in Moldenke, Lilloa 10: 303. 1944. TYPE: Argentina, Tucumán, Tafí. El. 750 m. 8 Aug. 1920. Venturi 866 [HT, or LECTOTYPE designated herein (specimen marked "Type" by Trelease): ILL; IT or ILT: ILL)].-- [= P. hieronymi C.DC. (fide Yuncker, 1955)]
 - venulosum Trel., Contr. U.S. Nat. Herb. 26(4): 132. 1929. TYPE:

 Costa Rica, near San Ramón. Brenes 14192 (HT: US 716432; PT at ILL: Standley & Valerio 45702). [= P. papantlense (cf. Burger, 1971)]
 - veredianum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 250. 1936. TYPE: Peru, Loreto, Caballo-Cocha on the Amazon River. Aug. 1929. Williams 2106 (HT: F 608810; IT: ILL).
 - verruculaecaule Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 250. 1936. TYPE: Peru, Ayacucho, Río Apurímac Valley, near Kimpitiriki. El. 400 m. 10, 11 May 1929. Killip & Smith 23025 (HT: US; IT: ILL).

- verruculaefolium Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 250. 1936. TYPE: Peru, Junín, La Merced. El. 700 m. May-June 1929. Killip & Smith 24089 (HT: US; IT: ILL).
- verruculaepetiolum Trel. in Standley, Field Mus. Publ. Bot. 18:
 368. 1937. TYPE: Panama, Bocas del Toro, Farm Six,
 Changuinola Valley. 3 March 1924. Dunlap 494 (HT: F; IT:
 ILL).-- [= P. terrabanum (fide Burger, 1971)]
- verruculigerum Trel., Contr. U.S. Nat. Herb. 26(4): 165. 1929.

 TYPE: Costa Rica, Guanacaste, Quebrada Serena, Tilarán.
 El. 700 m. 27 Jan. 1926. Standley & Valerio 46239 (HT: US 1307440; IT: ILL; PT at ILL: Standley & Valerio 44487, 45043, 45679, 45711, 46188, 46233).-- [= P. chrysostachyum (fide Burger, 1971)]
- vexans Trel., J. Wash. Acad. Sci. 19: 336. 1929. TYPE:
 Honduras, Atlantida, near Tela, at sea level. 18 Jan. 1928.
 Standley 54742 [HT: F 583715; IT: ILL (2 sheets)].-- [= P.
 jacquemontianum (fide Burger, 1971)]
- viae-marginis Trel. in Yuncker, Field Mus. Publ. Bot. 17: 355.
 1938. TYPE: Honduras, Comayagua, near Siguatepeque.
 El. 1050 m. 23 July 1936. Yuncker, Dawson & Youse 6044 (HT: ILL).-- [= P. atlantidanum (fide Standley & Steyerm., 1952);
 = P. pseudo-fuligineum (cf. Burger, 1971)]
- viçosanum Yuncker, Bol. Inst. Bot. (São Paulo) 3: 74, fig. 64.
 1966. TYPE: Brazil, Minas Gerais, Viçosa, Fazenda do
 Deserto. El. 690 m. 3 Nov. 1930. Mexia 5242 (HT: US 1618044; IT: ILL; PT at ILL: Mexia 5401-a).-- [This species upheld by Yuncker 1972]
- villosispicum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 251. 1936. TYPE: Peru, Junín, Pichis Trail, Santa Rosa. El. 625-900 m. 6, 7 July 1929. Killip & Smith 26178 (HT: US; IT: ILL; PT at ILL: Killip & Smith 24533).
- virgulticola Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):
 251. 1936. TYPE: Peru, Loreto, Iquitos, Fundo Indiano.
 El. 110 m. 25 Jan. 1932. Mexia 6430 (HT: UC; IT: ILL).
- * viridibaccum Trel., J. Arnold Arb. 9: 150. 1928. TYPE: New Guinea, Papua, Movabula. 10 May 1926. Brass 1370 (LECTOTYPE designated herein: A; ILT: ILL).-- [= P. lessertianum C.DC. (fide Chew annotation)]
 - viridilimbum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357):

 251. 1936. TYPE: Peru, Ayacucho, Río Apurímac Valley,
 Kimpitiriki. El. 400 m. 10, 11 May 1929. Killip & Smith
 22990 (HT: US; IT: ILL).

- viridispicum Trel., Contr. U.S. Nat. Herb. 26(4): 138. 1929.

 TYPE: Costa Rica, Limón, Montechristo below Cairo. El. 25 m.

 Feb. 1926. Standley & Valerio 48536 (HT: US 1307543; PT at ILL: Standley & Valerio 48599).-- [= P. garagaranum C.DC. (fide Burger, 1971)]
- viscaianum Trel. & Yuncker, Piperaceae no. S. Amer. 1: 139, fig. 115. 1950. TYPE: Colombia, Santander, Viscaina Creek, 31 km S of El Centro. El. ca 100 m. 31 Oct. 1936. Haught 2053 (HT: US 1742319; IT: ILL).
- whiteae Trel. in Woodson & Schery, Ann. Mo. Bot. Gard. 27: 299. 1940. TYPE: Panama, Chiriqui, valley of the upper Rio Chiriqui Viejo, near El Volcán. 18 July 1938. White 177 (HT: ILL).-- [- P. maxonii (fide Yuncker, 1950 and Burger, 1971)]
- wilsonii Trel. in Standley, Field Mus. Publ. Bot. 10: 161. 1931.

 Type locality: Honduras, Atlantida, vicinity of Tela, at sea level. No type indicated; perhaps lectotypification needed (authentic specimen from type locality at ILL: Standley 56874).
- yalochanum Trel. in Standley, Field Mus. Publ. Bot. 17: 234.
 1937. TYPE: Guatemala, Petén, Yaloch Trail, Dos Arroyos.
 2 May 1931. Bartlett 12849 (HT: ILL).-- [= P. cayoense (fide Standley & Steyerm., 1952)]
- yanaconasense Trel. & Yuncker, Piperaceae no. S. Amer. 1: 41, fig. 32. 1950. TYPE: Colombia, El Valle, El Silencio, Yanaconas, etc. El. 1900-2200 m. 28 Feb. 1939. Killip & García 33796 (HT: US 1770684; IT: ILL).
- yananoanum Trel. in Macbr., Field Mus. Publ. Bot. 13(No. 357): 252. 1936. TYPE: Peru, Huánuco, Yanano. El. 1800 m. 13-16 May 1923. <u>Macbride</u> 3796 (HT: F 534858; IT: ILL).
- yapeanum Trel. in Woodson & Seibert, Ann. Mo. Bot. Gard. 25:
 827. 1938. TYPE: Panama, Darién, near the mouth of Río Yape.
 El. 20 m. July 1937. Allen 351 (HT: ILL).-- [= P.
 villiramulum (fide Yuncker, 1950)]
- yaranum Trel. in Feddes Repert. Spec. Nov. Regni Veg. 23: 4, 8.
 1926. TYPE: Cuba, Oriente, Río Yara to Río Palmamocha, Sierra Maestra. 1922. <u>Ekman 14332</u> (HT: ?; IT: ILL; PT at ILL: <u>Ekman 6874</u>).

- yaxhanum Trel. in Standley, Field Mus. Publ. Bot. 17: 234. 1937.
 TYPE: Guatemala, Petén, Yaxha-Remate Road. 16 June 1933.
 Lundell 3826 (HT: ILL).-- [= P. martensianum (fide Standley & Steyerm., 1952)]
- yoroanum Trel., J. Wash. Acad. Sci. 19: 337. 1929. TYPE: Honduras, Yoro, Quebrada Seca. El. 30 m. Dec. 1927. Standley 53889 (HT: F 583866; IT: ILL).
- yousei Trel. in Yuncker, Field Mus. Publ. Bot. 17: 355. 1938.
 TYPE: Honduras, Comayagua, near El Achote, above
 Siguatepeque. El. 1350 m. 21 July 1936. Yuncker, Dawson & Youse
 6070).
 Wind Annual Properties
- yunckeri Trel. in Yuncker, Field Mus. Publ. Bot. 17: 355. 1938.
 TYPE: Honduras, subalpine bog near El Achote, above
 Siguatepeque. El. 1350 m. 5 Aug. 1936. Yuncker, Dawson & Youse 6331 (HT: ILL).
- yunckeri var. latum Trel. in Yuncker, Field Mus. Publ. Bot. 17: 355. 1938. TYPE: Honduras, Comayagua, near El Achote, above Siguatepeque. El. 1350 m. 5 Aug. 1936. Yuncker, Dawson & Youse 6333 (HT: ILL).
- yurimaguasanum Trel. in Macbr., Field Mus. Publ. Bot. 13(No.
 357): 253. 1936. TYPE: Peru, Loreto, Iquitos. El. 100 m.
 3-11 Aug. 1929. Killip & Smith 27274 (HT: US; IT: ILL; PT at
 ILL: Killip & Smith 27628, 29045; Williams 5184, 5442).
- yzabalanum C.DC. var. pubinerve Trel. in Standley, Field Mus. Publ. Bot. 10: 161. 1931. Type locality: Honduras, Atlántida, in thickets about Tela and Lancetilla. No type indicated; perhaps lectotypification needed (authentic specimens from vicinity of type locality at ILL: <u>Standley</u> 55776, 56872).
- zingiberinum Trel. in Standley, Field Mus. Publ. Bot. 18: 370.
 1937. TYPE: Costa Rica, Santa Clara Hills. El. 1500 m.
 16 June 1928. Stork 2594 (HT: ILL).-- [= P. verruculosum
 C.DC. (fide Burger, 1971)]
- zonulatispicum Trel., Contr. U.S. Nat. Herb. 26(4): 164. 1929.

 TYPE: Costa Rica, Cartago, El Muñeco, Río Navarro.

 El. 1500 m. 7 March 1926. Standley & Valerio 51116 (HT: US 1307636; PT at ILL: Standley & Valerio 51335).-- [- P. carpinteranum (fide Burger, 1971)]

Pothomorphe Miq.

- baileyorum Trel. in Woodson & Schery, Ann. Mot. Bot. Gard. 27:

 306. 1940. TYPE: Panama, Canal Zone, Barro Colorado Island.
 27 June 1931. L.H. & E.Z. Bailey 414 (HT: ILL).-- [= P.
 peltata (L.) Miq. (fide Yuncker, 1950 and 1957); Lepianthes
 peltata (L.) Raf. (cf. Howard, 1973)]
- <u>baileyorum</u> var. <u>paucispica</u> Trel. in Woodson & Schery, Ann. Mot. Bot. Gard. 27: 306. 1940. TYPE: Panama, Canal Zone, Salamanca Hydrographic Station, Río Pequeni. El. 80 m. 28 July 1938. <u>Woodson, Allen & Seibert 1573</u> (HT: ILL).--[-P. peltata (fide Yuncker, 1950 and 1957); L. <u>Peltata</u> (cf. Howard, 1973)]
- dussii Trel. ex Stehlé, Fl. Descr. Antill. Fr. 2(1):61, pl. 1.
 1940; Bull. Agric. Martinique 9(2): 137, tab. 1. 1940. TYPE:
 Martinique, Parnasse, Marin. Duss 1340 (HT: US; PT at ILL:
 Stehlé & Stehlé 2318, 3191, 3200, 3239).-- [- L. peltata (cf. Howard, 1973)]
- tecumensis Trel. var. grandis Trel. in Woodson & Schery, Ann.

 Mo. Bot. Gard. 27: 307. 1940. TYPE: Panama, vicinity of Arraijan. El. ca 15 m. 21 July 1938. Woodson, Allen & Seibert 1398 (HT: ILL).-- [= P. peltata (fide Yuncker, 1950 and 1957); = L. peltata (cf. Howard, 1973)]

Sarcorhachis Trel., emend. Steyerm.

- * incurva (Sieber ex Schultes) Trel. var. stehlei Trel. ex Stehlé,
 Bull. Soc. Bot. France 83: 627. 1936 (nomen nudum); Fl.
 Descr. Antill. Fr. 2(1): 67, pl. 2. 1940; Bull. Agric.
 Martinique 9(2): 143, tab. 2. 1940. TYPE: Guadeloupe.
 El. 650 m. 16 Feb. 1936. Stehlé & Stehlé 380 (Syntype =
 LECTOTYPE designated herein: NY; ILT: ILL).-- [= S. incurva
 (fide Steyerm., 1971 and Howard, 1973)]
 - incurva var. treleasii Stehlé, Fl. Descr. Antill. Fr. 2(1): 67.
 1940; Bull. Agric. Martinique 9(2): 143. 1940. TYPE:
 Guadeloupe. El. 650 m. 27 June 1937. Stehlé & Stehlé 1677
 (HT: NY; fragments of type at ILL).-- [= S. incurva (fide Steyerm., 1971 and Howard, 1973)]

Schillera Kunth

<u>Karwinskiana</u> Kunth, Linnaea 13: 700. 1839 [originally named Piper karwinskianum by Kunth (loc. cit.), i.e., that name published pro syn.]. TYPE: Mexico, near Mexico City.
<u>Karwinski</u> [HT, or ST to be lectotypified(?): "in herb.
<u>Lucaeano"</u>; fragments of the original collection (obtained)

from LE) at ILL: Karwinski 827, 827b].-- [= Piper karwinskianum (Kunth) C.DC. in DC.-- the species is known only from the type locality (fide Standley, 1920)]

ulmifolia Kunth, Linnaea 13: 698. 1839. TYPE: Martinique.

Sieber 7 [HT: "... herb. Lucaeani"; IT (obtained from W):

ILL; PT at ILL: Trinidad, Sieber 18].-- [= Piper dilatatum (fide Howard, 1973)]

Trianaeopiper Trel.

- <u>confertinodum</u> Trel. & Yuncker, Piperaceae no. S. Amer. 1: 423, fig. 381. 1950. TYPE: Colombia, Chocó, S of Río Condoto, between Quebrada Guarapo and Mandinga. El. 120-180 m. April 1939. <u>Killip 35678</u> (HT: US 1772363; PT at ILL: <u>Killip 35317</u>).
- garciae Trel. & Yuncker var. decurtispicum Trel. & Yuncker,
 Piperaceae no. S. Amer. 1: 430. 1950. TYPE: Colombia, El
 Valle, Dagua Valley, Santa Rosa. El. 200-300 m. 22 Sep.
 1922. Killip 11531 (HT: GH; IT: ILL).
- <u>mexiae</u> Trel. & Yuncker, Piperaceae no. S. Amer. 1: 432, fig. 392. 1950. TYPE: Ecuador, Los Rios, Hacienda "El Oasis", Cantón Vinces. El. 60 m. 5 Nov. 1934. <u>Mexia</u> 6651 (HT: US 1619074; IT: ILL).

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The title of the paper should be typed in all uppercase (capital) letters with 2 blank lines above the title and one beneath; then the name of the author in ordinary upper-and lower-case letters, along with his address (if so desired); followed by 2 blank lines; then the first line of text. It is usually best to leave a blank line between paragraphs.

All scientific plant and animal names and group names should be typed either in italic type (if available) or underscored. Any corrections in the text made by the author must be complete and neat as they will be photographed as they are.

The finished typescript as submitted by the author will be reduced from the 85% x 5% inch size as submitted to 6 2/8 x 4 inches by the printer. It is therefore advisable to place a centimeter or millimeter scale on all text figures and plates included.

Use a *new* heavily inked black typewriter ribbon and be sure to *clean* the type on the typewriter after each several pages of typing.

Cost of publication at present is \$11.00 US per page, with no subsequent rebates, but this rate may vary depending on inflation and costs, so it is best to inquire as to current rates. The page charges are due with the typescript and no paper will be published before payment is received in full. Each author will receive gratis a proportionate share of the printed copies remaining after paid subscriptions are filled, but if separates (reprints or offprints) are desired, these will be charged extra in accord with the current rate for offprints provided by the printer. The cost of all such separates ordered must also be paid for in advance at the time the typescript is sent. No orders for separates will be accepted later, nor can additions or corrections be accepted.

Authors are asked to indicate in light pencil on the reverse side of each page of their typescript the page number so that no mistakes in sequence occur.

Each number consists of not less than 32 pages. All manuscript accepted will be published in the next issue, so that the size of numbers may vary greatly. A volume will contain 512 pages. This plan insures prompt publication of all accepted manuscript.

Illustrations will be published according to the desires of the authors. No extra charge is made for line drawings, such as are ordinarily reproduced in zinc, or for diagrams, tables, or charts, provided they conform to certain limitations of size and proportion. An extra charge will be made for halftones, depending on their size, as fixed by the engraver.

Articles dealing with research in all lines of botany and plant ecology, in any reasonable length, biographical sketches, and critical reviews and summaries of literature will be considered for publication.